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November 2000



# Rogue National Wild and Scenic River: Hellgate Recreation Area Management Plan/Draft Environmental Impact Statement





As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interest of all our people. The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. administration.

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# Hellgate Recreation Area Management Plan and Draft Environmental Impact Statement

November 2000

03/11/2001  
Hellgate/03/11/2001

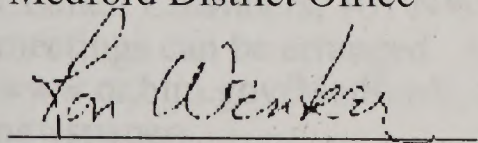
Dear Reader:

The Hellgate Recreation Area Management Plan/Draft Environmental Impact Statement (DEIS) for the 27 mile recreation section (Applegate River to Crane Lake) analyzes alternatives for long-term management of this popular recreation area. We have made every effort to identify and address important perspectives on the environmental impacts of the alternatives including the preferred alternative. In the 1993 Medford District Resource Management Plan (RMP), we identified the Hellgate Recreation Area on the Rogue River as a Special Area Land Use Allocation. The RMP indicated that site-specific management plan for the area was needed to address future impacts to this highly used area. The attached plan was developed by the Medford District RMP personnel and is representative of a long-term wildlife program designed to develop baseline biological, physical and social data needed to assess our current management decisions as well as the proposed alternatives contained in this draft.

We welcome your comments on the content of this document. We are particularly interested in comments that address one or more of the following: (1) new information that would affect the analysis, (2) possible improvements in the analysis, and (3) suggestions for improving or clarifying the proposed management direction. Specific comments are the most useful. Comments including names and addresses of contributors will be available for public review. Individual respondents may request confidentiality. If you wish to submit your comments for public review or want disclosure under the Freedom of Information Act, you must state this possibility in the beginning of your written comments. Such reviews will be handled to the extent allowed by law. All submissions from organizations or individuals and from the Medford District, including recommendations or officials of organizations or individuals, will be made available for public inspection under authority. BLM will respond to comments addressing the adequacy of the Hellgate RMP/DEIS in the Proposed Management Plan/Draft Environmental Impact Statement. The DEIS and your comments will be published on the Medford District web site, [www.blm.gov/medford](http://www.blm.gov/medford), under "Planning Decisions."

There are five revised management alternatives, each with a different emphasis. Public comment was requested in developing and analyzing these and alternatives in this document. Also considered was information supplied by local governments, business groups and data developed by Bureau staff. The alternatives were designed to resolve, in different ways, the land and resource management issues identified in the early stages of the planning process. In order to be considered in the Proposed Management Plan/Draft Environmental Impact Statement, comments must be received within 60 days of the Federal Register notice of availability.

**Prepared by:**  
U.S. Department of Interior  
Bureau of Land Management  
Medford District Office



Ron Wenker  
District Manager







# United States Department of the Interior

BUREAU OF LAND MANAGEMENT  
MEDFORD DISTRICT OFFICE  
3040 BIDDLE ROAD  
MEDFORD, OREGON 97504

IN REPLY REFER TO:

8351.2(11780)  
Hellgate/RAMP/DEIS

Dear Reader:

The Hellgate Recreation Area Management Plan/Draft Environmental Impact Statement (DEIS) for the 27 mile recreation section (Applegate River to Grave Creek) analyzes alternatives for long term management of this popular recreation area. We have made every effort to disclose and discuss important perspectives on the environmental impacts of the alternatives including the preferred alternative. In the 1995 Medford District Resource Management Plan (RMP), we identified the Hellgate Recreation Area on the Rogue River as a Special Area Land Use Allocation. The RMP indicated that a site-specific management plan for the area was needed to address issues unique to this highly used area. The attached draft plan was developed by Medford District BLM personnel and is representative of a long term studies program designed to develop baseline biological, physical and social data needed to assess our current management direction as well as the proposed alternatives contained in this draft.

We welcome your comments on the content of this document. We are particularly interested in comments that address one or more of the following: (1) new information that would affect the analysis, (2) possible improvements in the analysis; and (3) suggestions for improving or clarifying the proposed management direction. Specific comments are the most useful. Comments, including names and addresses of commentors, will be available for public review. Individual respondents may request confidentiality. If you wish to withhold your name and/or address from public review or from disclosure under the Freedom of Information Act, you must state this prominently at the beginning of your written comment. Such requests will be honored to the extent allowed by law. All submissions from organizations or businesses and from individuals identifying themselves as representatives or officials of organizations or businesses, will be made available for public inspection in their entirety. BLM will respond to comments addressing the adequacy of the Hellgate RAMP/DEIS in the Proposed Management Plan/Final Environmental Impact Statement. This DEIS and your comments will be published on the Medford District web site, [www.or.blm.gov/Medford/](http://www.or.blm.gov/Medford/), under "Planning Documents."

There are five resource management alternatives, each with a different emphasis. Public comment was considered in developing and analyzing issues and alternatives in this document. Also considered was information supplied by local governments, known interest groups and data developed by Bureau staff. The alternatives were designed to resolve, in different ways, the land and resource management issues identified in the early stages of the planning process. In order to be considered in the Proposed Management Plan/Final Environmental Impact Statement, comments must be received within 90 days of the *Federal Register* notice of availability.

BLM will discuss the various management alternatives and answer your questions in a series of public open houses. The open house will take place January 24, 2001, 7-10 p.m., at the Medford District Office, 3040 Biddle Road in Medford and January 18, 2001, 7-10 p.m. at the City of Grants Pass Council Chambers, 101 NW A. Street in Grants Pass. If there is sufficient public interest, additional meetings can be arranged. All meetings will be published on the Medford District web site, [www.or.blm.gov/Medford/](http://www.or.blm.gov/Medford/), under "Planning Documents" and in the Medford, Ashland, and Grants Pass newspapers.

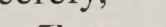


All written comments should be sent to:

Or comments may be e-mailed to [Cori\\_Cooper@or.blm.gov](mailto:Cori_Cooper@or.blm.gov).

Sincerely,

Sincerely,



William E. Ray, Jr.

Sincerely,

For Winkler

Ron Wenker  
District Manager  
Medford District



# **Rogue National Wild and Scenic River: Hellgate Recreation Area Management Plan/Draft Environmental Impact Statement**

**1. Responsible Agency:** United States Department of the Interior, Bureau of Land Management

**2. Draft (X)**      Final ( )

**3. Administrative Action (X)**                      Legislative Action ( )

**4. Abstract:** The Hellgate Recreation Area Management Plan/Draft Environmental Impact Statement considered at least five proposed alternatives for managing various resources and programs along the 27 mile stretch of the Rogue River System. In 1968, the United States Congress designated the U.S. Forest Service and the BLM as the lead agencies for managing the land and water within the identified National Wild and Scenic Rogue River corridor (84 miles from its confluence with the Applegate River downstream to the Lobster Creek Bridge). The portion of the river from the mouth of the Applegate River downstream to Marial, a distance of approximately 47 miles, is administered by the BLM, Medford District Office. The lower 37 miles are located within the boundaries of the Siskiyou National Forest and are administered by the U.S. Forest Service.

The Rogue River was one of eight rivers identified as part of the National Wild and Scenic Rivers System when the Wild and Scenic Rivers Act was passed in 1968. Designated rivers are classified as wild, scenic, or recreational. The original eight rivers were "instant designation" rivers; they were not study rivers. The Hellgate Recreation Area was classified as a recreational river; it was never designated a study river.

All of the recommended planning issues share one topic: the growth of different types of recreation use on the river. How much recreation use can and should the river support? How many visitors to the river by watercraft can and should the river support? Major planning issues revolve around motorized and nonmotorized boating, nonmotorized boat angling, user fees, camping, trails, day-use areas, public access, and visitor services.

The five proposed alternatives for management of the recreational, natural, and cultural resources of the Rogue River Hellgate Recreation Area have been developed and analyzed in accordance with state and federal requirements. Each alternative offers a possible course of action that, if selected, would provide direction for land use and guidelines for future decisions.

Release of this draft EIS, begins a 90-day comment period.

**5. Date comments must be received by: February 24, 2001**

**6. Date Hellgate Recreation Area Management Plan/Draft Environmental Impact Statement made available to Environmental Protection Agency and public: November 24, 2000**

**7. For further information contact:**

Cori Cooper, Team Leader  
Bureau of Land Management  
Medford District Office  
3040 Biddle Road  
Medford, Oregon 97504  
Telephone: (541) 618-2428







# User's Guide

The Hellgate Recreation Area Management Plan/Draft Environmental Impact Statement (RAMP/DEIS) is divided into seven sections: Summary, Chapter 1 - Introduction, Chapter 2 - Alternatives, Chapter 3 - Affected Environment, Chapter 4 - Environmental Consequences, Chapter 5 - Consultation and Coordination, and supporting materials or appendices. The major sections of the RAMP/DEIS are explained below.

## Chapter 1

This chapter contains introductory material to the Draft RAMP/EIS. It includes a description of the planning area and the purpose and need for preparing the Draft RAMP/EIS. Of importance, it identifies the issues or concerns addressed in the RAMP/EIS process. Included is a discussion of the RAMP's relationship to BLM policies, programs, and other plans.

## Chapter 2

This chapter describes the range of alternatives including the No Action Alternative (Current Management) and the BLM's Preferred Alternative (Alternative E), which is the Medford District's Proposed Action. The range of alternatives lists different ways the issues could be resolved; the alternatives present different approaches to meeting the underlying needs identified in Chapter 1.

## Chapter 3

This chapter describes the physical, biological, and socioeconomic characteristics of BLM-administered land as they exist in the planning area. Resources that could be affected by BLM management alternatives are emphasized.

## Chapter 4

In this chapter, the environmental consequences (effects) of implementing the alternatives (described in Chapter 2) are defined and compared to the existing conditions (described in Chapter 3). This chapter is organized by resource elements and issues. Effects are described by alternative within each individual resource as appropriate. Direct, indirect, and cumulative effects are all considered to the extent identifiable in each analysis (40 CFR 1508.8).

## Chapter 5

This chapter describes agencies and organizations BLM has worked with during the preparation of the Draft RAMP/EIS. It summarizes public involvement and includes the List of Preparers.

## Tables, Maps, and Figures

Tables, maps, and figures are located after each chapter.

## Acronyms

BLM- Bureau of Land Management  
EIS- Environmental Impact Statement  
ESA- Endangered Species Act  
MDO- Medford District Office  
MTB- Motorized Tour Boat  
OHV- Off-highway Vehicle  
ORV- Outstandingly Remarkable Value  
RAMP- Recreation Area Management Plan  
RMP- Resource Management Plan  
VC- Visitor Center



The following table lists the chapters in the User's Guide. The chapters are listed in the order in which they should be read. The chapters are listed in the order in which they should be read. The chapters are listed in the order in which they should be read.

## Chapter 1

This chapter contains information regarding the User's Guide. It includes a description of the User's Guide and the chapters in the User's Guide. It also includes a description of the User's Guide and the chapters in the User's Guide.

## Chapter 2

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## Chapter 5

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## Tables, Figures, and Figures

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## Appendix

This section contains information regarding the User's Guide. It includes a description of the User's Guide and the chapters in the User's Guide. It also includes a description of the User's Guide and the chapters in the User's Guide.



# Executive Summary

The Hellgate Recreation Area covers approximately 8,000 acres in southwestern Oregon administered by the BLM Medford District Office (see Map 1-1 and Figure 1-1). The Hellgate Recreation Area, the first 27 miles of the National Wild and Scenic Rogue River, is classified as a recreational river area. Management of this recreational river area will give primary emphasis to protecting the values that make it outstandingly remarkable while providing a diversity of river-related recreational opportunities in a developed setting.

All of the following planning issues revolve around the growing demand for recreational use on the river and the need to protect the natural and cultural resources (see Figures 2-1, 2-2 and 2-3). Some of the primary issues include:

- Conflicts between recreational users including motorized and nonmotorized float boaters, motorized boaters and anglers, and nonmotorized float boaters and anglers. Most are related to safety, noise, encounters, wakes from motorized boats and competition for use areas.
- Conflicts between recreational users and private landowners concerning noise, encounters and trespass.
- Concerns about the potential impacts to fish species and possible bank erosion from motorized boats and other uses. Research results have decreased it from a conflict to a concern.
- Demand for improved or additional recreation facilities such as visitor centers, parking areas, fishing access, boat launch sites, restrooms, trash cans, campsites and day-use sites.
- Demand for diverse recreation opportunities such as jetboat racing, multiple use trails, rock hounding, gold panning, historic site exploration and wildlife viewing.
- Demand for increased visitor services such as river patrols, law enforcement and educational activities.

Each alternative offers a possible course of action that, if selected, would provide direction for land use and guidelines for future decisions (see Tables S-1 and S-2). The alternatives respond to the issues identified during the “scoping” phase of the planning process.

## Range of Planning Alternatives

### **Alternative A:**

Fewer Watercraft and Less Visitor Use. The objectives of Alternative A are to improve natural resource conditions, significantly reduce watercraft use levels and provide recreational opportunities in a less crowded setting than currently occurs while protecting the environment and outstandingly remarkable values.

### **Alternative B:**

No Action or Current Management/Watercraft and Visitor Use As It Is Now. The objectives of Alternative B are to continue present levels of management and visitor use while retaining the generally natural appearing condition of the area while protecting the environment and outstandingly remarkable values.

### **Alternative C:**

Angler and Floater Enhancement/More Watercraft and Visitor Use. The objectives of Alternative C are to enhance the angling and floating experience while protecting the environment and outstandingly remarkable values.



## **Alternative D:**

Maximum Watercraft and Visitor Use. The objectives of Alternative D are to maximize the level of recreational use while protecting the environment and outstandingly remarkable values.

## **Alternative E:**

The Preferred Alternative. The objectives of Alternative E are to increase the level of recreational use while protecting the environment and outstandingly remarkable values.

# **Planning Issues**

All of the recommended planning issues share one topic: the growth of different types of recreation use on the river (see Figure 2-1 and 2-2). How much recreation use can and should the river support? In addition, how many visitors to the river by watercraft can and should the river support?

## **Motorized Boating**

How should motorized boating (commercial, private, and competitive) be managed (e.g., how many, what type, permitted season, river reach, mix between commercial and private)? Motorized boats are defined as boats with a motor, regardless of the horsepower rating.

The increase in the number of visitors using motorboats, especially motorized tour boats (MTBs) has prompted concerns over conflicts among motorized boating and nonmotorized float boating, boat angling, and landowners (see Figure 2-3). Motorized boating contributes to competition for fishing areas. Many anglers and other users resent the noise, wake, and potential safety problems of motorized boating. The issue also includes a concern over streambank erosion/deposition as it affects the condition of riparian areas, loss of private land and possible impacts to sensitive fish species. The visitor use conflicts are most evident during the hot summer weekends and the fall fishing season.

## **Nonmotorized Float Boating**

How should nonmotorized float boating be managed (e.g., how much, what kind, permitted season, mix between commercial and private)? Does visitor use by nonmotorized float boating affect sensitive fish species? Nonmotorized float boating means watercraft without a motor (inflatable rafts, hard shell and inflatable kayaks, driftboats and canoes).

The growth of nonmotorized float boating has prompted concerns over conflicts among nonmotorized float boaters and motorized boaters, anglers, and landowners. The social problems are most evident during the hot summer weekends (see Figure 2-3). The number of commercial permittees is not limited in the Hellgate Recreation Area under current management. Visitors to the river by watercraft have the choice to either have a private trip or employ the services of a commercial outfitter.

## **Nonmotorized Boat Angling**

How should a quality nonmotorized boat angling experience be maintained or enhanced (e.g., how much, what kind, permitted season, mix between commercial and private watercraft use)? Nonmotorized boat angling means fishing from a watercraft without a motor (inflatable rafts, hard shell and inflatable kayaks, driftboats and canoes).

The nonmotorized boat angling experience issue has four main components: competition for fishing areas, angler versus boating conflicts (i.e., boating across fishing water), biological health of fisheries resources, noise and safety conflicts between nonmotorized angling watercraft users and motorboat users (see Figure 2-3). The jet boat or motorized tour boat service was clearly identified by anglers as a major point of controversy.



## **User Fees**

Should user fees be levied on all visitors using watercraft within the Hellgate Recreation Area of the Rogue River? How can fees that are collected be reinvested in on-the-ground management? Should private users pay their share of the cost of management services and facilities provided?

## **Recreational Opportunities**

What types of recreational opportunities should be provided?

### **How and Where Should Camping be Managed?**

How should BLM contribute to the developed and undeveloped camping opportunities while protecting river resources? What level and type of developments are appropriate?

### **How and Where Should a Trail System be Managed?**

How should BLM contribute to the developed and undeveloped trails while protecting river resources? What level and type of developments are appropriate?

The limited number and primitive quality of trails within the Hellgate Recreation Area restricts access for recreationists. A trail system to accommodate a broad range of visitors (e.g., hikers, equestrians, anglers, bicyclists and off-highway vehicle users) could be developed to improve access opportunities to the Hellgate Recreation Area and adjacent public lands.

### **What Type of Day-Use Areas Should be Provided?**

What type of day-use recreational opportunities should be provided? Should there be more "watchable wildlife" sites?

Day-use activities that occur in the planning area are: driving for pleasure, fishing, gold panning and dredging, wildlife observation, rock hounding, picnicking, sightseeing, photography, sunbathing, boating, swimming and hunting.

### **What Action Should be Taken to Manage Public Access?**

Are additional or improved boat ramps and fishing access sites needed? Should vehicular access be regulated?

There are many launch and landing sites with crowding problems and visitors exhibiting rude behavior during periods of high use.

### **What Action Should be Taken to Provide Visitor Services?**

Where should a visitor center be located? What level and type of developments are appropriate?

The existing visitor center at Rand is inadequate for current needs and fails to meet requirements established by law for public buildings.

## **Specific Management Decisions to be Made**

Many issues and concerns were identified during several scoping processes and subsequently analyzed by the BLM. The following lists the issues for which specific management decisions will be made as part of the RAMP. These decisions are grouped here to facilitate discussion and incorporation in the plan. These groupings are used throughout the RAMP.

### **All Watercraft Use (Motorized and Nonmotorized)**

Decisions will be made whether or not to establish:

- Sound management areas.
- Erosion sensitive areas.



- Angling enhancement zones.
- Fall chinook spawning/sensitive areas.
- Safety sites of concern.

## **All Motorized Boating**

Decisions will be made whether or not to establish:

- Seasons of use.
- River reaches.
- Thrill power maneuver areas.
- Boat speed limit areas.
- Two-way radio communication requirements.

## **Private Motorized Boating**

Decisions will be made whether or not to establish:

- Allocations.
- River reaches.

## **Commercial Motorized Angling**

Decisions will be made whether or not to establish:

- Allocations.
- Maximum number of permits.
- Maximum number of passengers.

## **Commercial Motorized Tour Boating**

Decisions will be made whether or not to establish:

- Allocations for the number of boat trips for the Applegate Reach.
- Allocations for the number of boat trips for the Dunn Reach.
- Allocations for the number of boat groups/runs.
- A maximum boat size.
- A maximum number of permits.
- Notice display requirements.
- Off-plane procedure requirements.
- Annual daily schedule.
- Daily use or time allowed in the planning area.

## **Special Motorized Boating Events**

Decisions will be made whether or not to establish:

- Allocations for the time allowed per event.
- River reaches.
- Requirements for new events.

## **Nonmotorized Float Boating**

Decisions will be made whether or not to establish:

- Allocations.

## **Nonmotorized Boat Angling**

Decisions will be made whether or not to establish:

- Allocations.

## **Boater Fees and Permits and User Fees**

Decisions will be made whether or not to establish:

- Boater fees and permits by commercially-guided watercraft.
- Requirements for boater permits and fees by watercraft for private use.
- Requirements for user fees.



## Camping

Decisions will be made whether or not to establish:

- Primitive camping areas.
- Developed camping areas.
- Human waste packout.
- Campfire requirements, such as the use of fire pans.
- Camping day limits.
- Maximum group size limits.

## Trails

Decisions will be made whether or not to establish:

- New trails to be developed.
- Existing trails to be improved and/or expanded.
- Off-highway vehicle trails to be managed.

## Day-Use Areas

Decisions will be made whether or not to establish:

- Primitive day-use areas.
- Developed day-use areas.
- Back Country Byways.
- Watchable wildlife sites.
- Limited off-highway vehicle use areas.
- Prohibition-of-firearm discharge areas.

## Public Access

Decisions will be made whether or not to:

- Maintain existing boat ramps.
- Improve boat ramps.
- Develop new boat ramps.
- Develop new fishing access sites.
- Regulate vehicle access by requiring day-use parking passes on BLM-administered lands.

## Visitor Services

Decisions will be made whether or not to:

- Develop a new administrative and/or visitor center.
- Determine the location of same.

## Rogue River Studies

In response to the issues and concerns identified by the public during scoping, contracted and independent studies were conducted to gather additional information to assist in future decisions related to the river. Studies included:

- **Boating Safety.** This study identified, mapped and described sites of potential safety risk to boaters. Recommendations such as the use of “spotters” at certain points along the river and designation of a lead or “scout” boat in parties were made to reduce risks.

*Water Resources Consulting 1995*

- **Fisheries.** This effort focused on the effects of river use on juvenile fish. It concluded that all watercraft disturbed the fish, however, slow moving watercraft and people wading in the river disturbed fish the most.

*Oregon Department of Fish and Wildlife 1995*



- **Economic Effects.** All aspects of river use were evaluated to determine their relationships to the local economy. Recreational use of the river was found to be a significant economic contributor to the area.

*Economic Strategies Northwest 1994*

- **Erosion.** Erosion sensitive sites within the study area were mapped and evaluated. Five percent of the area was found to be sensitive. Most erosion was naturally caused and some erosion was due to motorized boats and other human-caused sources.

*Oregon State University 1993*

- **Cultural Resources.** This study included a literature and field review. All cultural resources were mapped and described for the area. The study recommended protective measures and educational opportunities and listed areas unsuitable for recreational use or development.

*Cascade Research of Ashland 1994/Resource Inventory 1995*

- **Landowner Attitudes.** Interviews with riverside land owners were conducted to assess general perceptions relative to each type of use. The study concluded that motorized boats were the least favorable use in the eyes of landowners.

*Southern Oregon University 1994*

- **Visitor Attitudes.** User groups were identified and interviewed to determine their perceptions of the quality of their recreation experience and their satisfaction levels. A majority in all groups recognized the existence of crowding and user conflicts though they all were generally satisfied with the quality of their recreation experience.

*Oregon State University 1992*



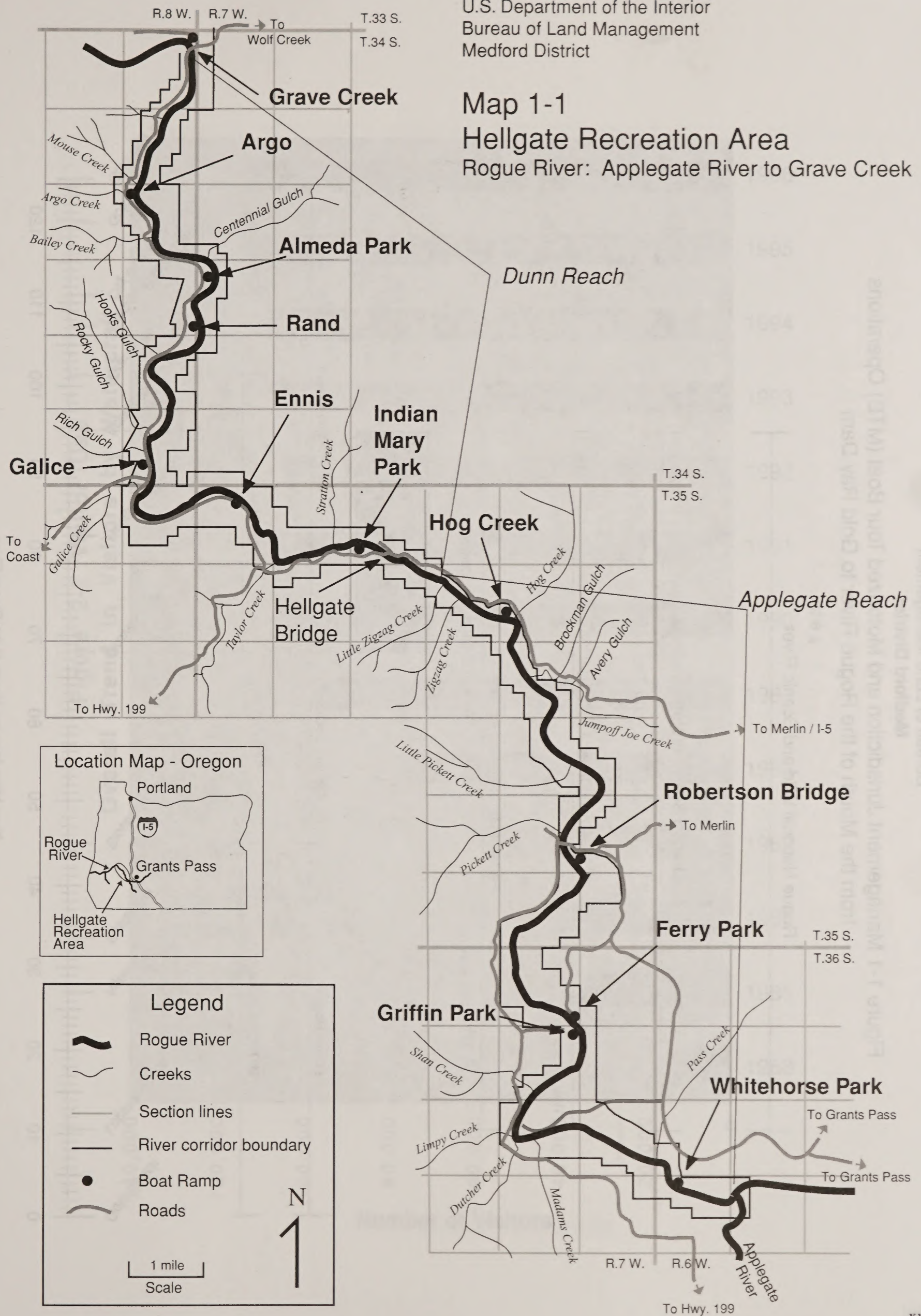








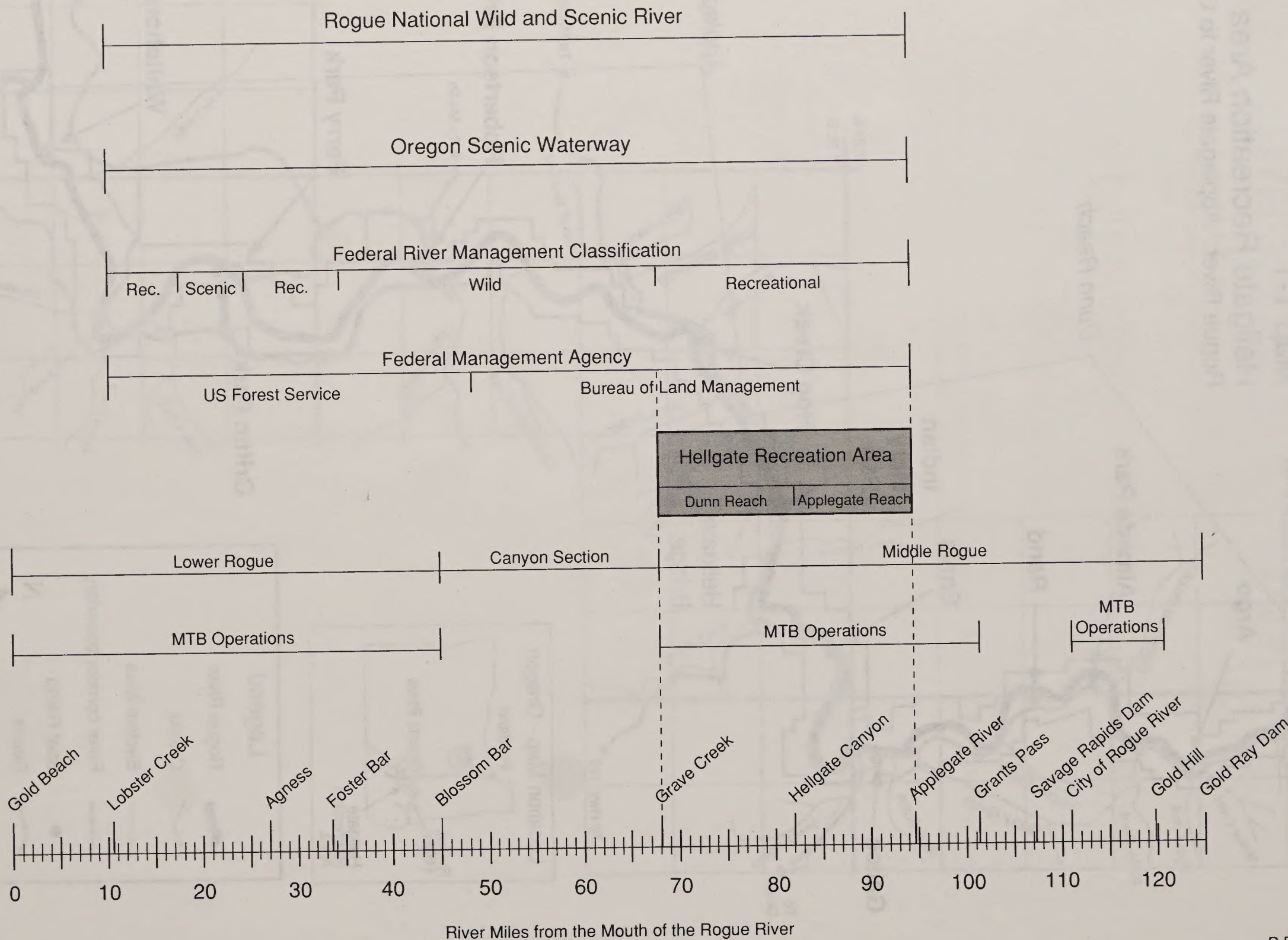
Map 1-1  
Hellgate Recreation Area  
Rogue River: Applegate River to Grave Creek





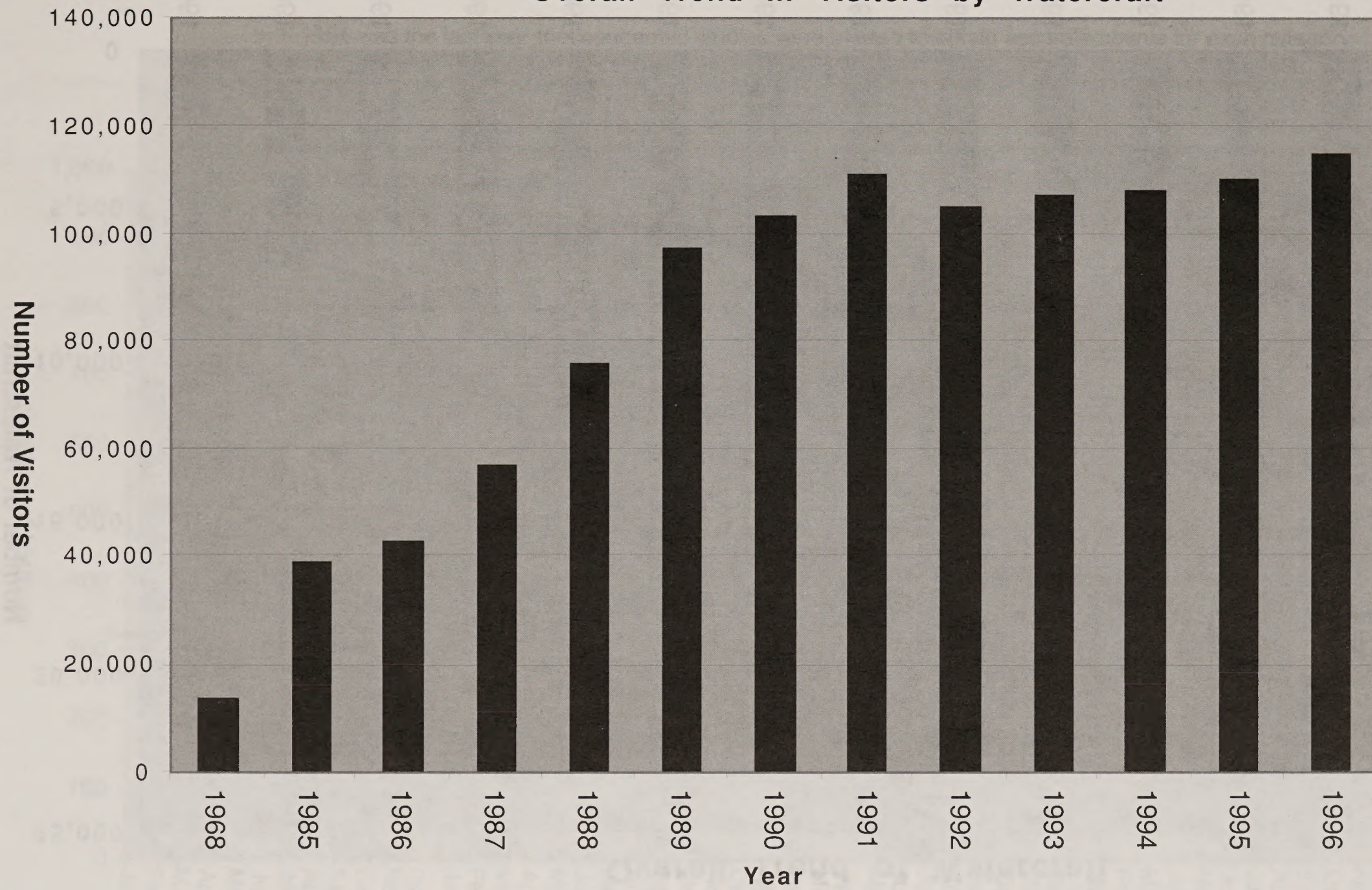
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Bureau of Land Management  
**Medford District**

**Figure 1-1 Management Jurisdiction and Motorized Tour Boat (MTB) Operations from the Mouth of the Rogue River to Gold Ray Dam**



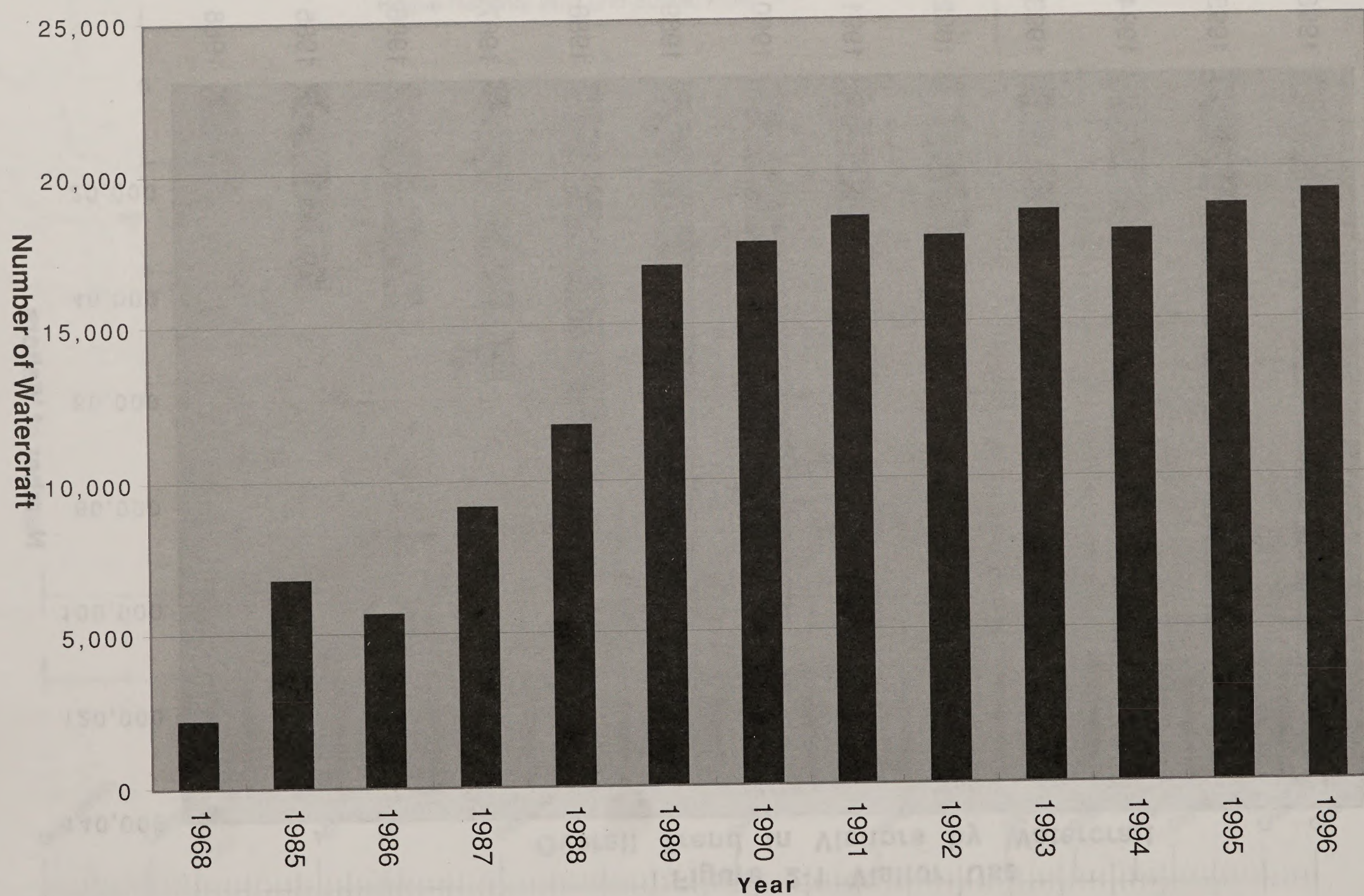


**Figure 2-1 Visitor Use**  
**Overall Trend in Visitors by Watercraft**





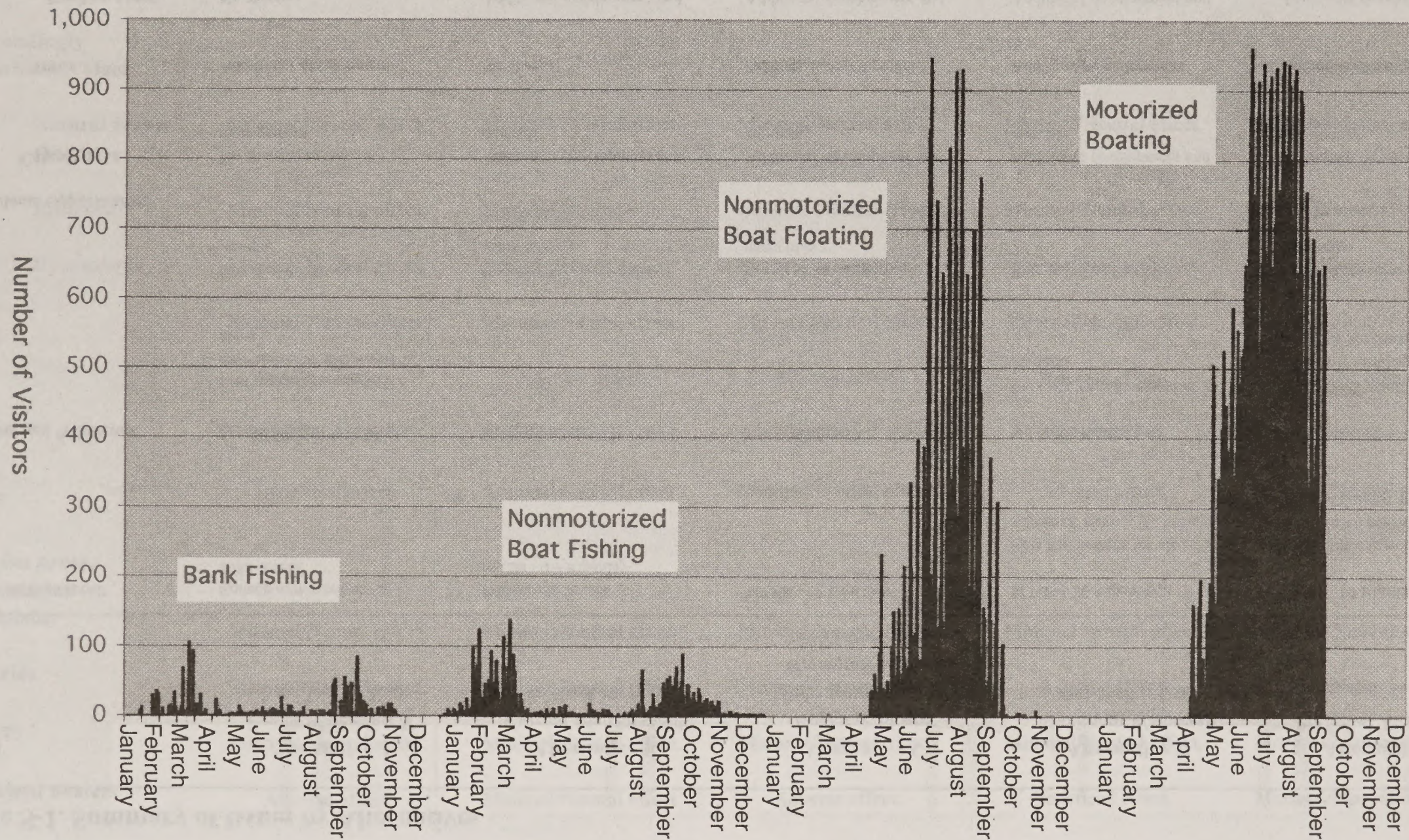
**Figure 2-2 Watercraft Trips  
Overall Trend of Watercraft**





**Figure 2-3. Visitor Use Comparison of Bank Fishing, Nonmotorized Boat Fishing, Nonmotorized Float Boating, and Motorized Boating in 1991**

1991 was the last year that contracted studies were utilized to obtain accurate counts for each category of activity. Subsequent observation since 1991 indicate that these trends have remained static.





**Table S-1. Summary of Issues by Alternatives**

<b>Issues</b>	<b>Alternative A Fewer Watercraft &amp; Less Visitor Use</b>	<b>Alternative B Current Management/ No Action</b>	<b>Alternative C Angler &amp; Floater Enhancement/More Watercraft &amp; More Visitor Use</b>	<b>Alternative D Maximum Watercraft and Visitor Use</b>	<b>Alternative E Preferred Alternative</b>
<b>Motorized Watercraft</b>	Reduce motorized use to 1985 levels.	Present use levels. MTBs - 19 trips/day	MTBs - 12 trips/day.	MTBs - 26 trips/day.  Fees and permits for all watercraft users.	MTBs - 19 trips/day.  White water trips in the Dunn Reach restricted in July and August weekends.
<b>Nonmotorized Watercraft</b>	Limitations to 1985 levels.  Fees and permits required for commercial and private users.	No regulations.	No regulations.	No regulations.  Fees and permits would be required.	No regulations.  Regulations would be required if carrying capacities are reached.
<b>Fees</b>	Required for all user groups.	Required for commercial users only.	Required for commercial users only.	Required for all users.	Required for commercial users only.
<b>Recreational Opportunities</b>					
<b>Camping</b>	No changes to current management.	Additional development and controls.	Additional development and controls.	Additional development and controls.	Additional development and controls.
<b>Trails</b>	Additional development.	No change.	Additional development.	Additional development.	Additional development.
<b>Day-Use Access</b>	No change.	Additional development and controls.	Additional development and controls.	Additional development and controls.	Additional development and controls.
<b>Visitor Services</b>	A new VC would be constructed in Merlin or Grants Pass. Rand Staff would provide customer services out of the new VC. The River program staff would continue to provide administrative services out of the district office.	The Rand staff would continue to provide customer services out of the Rand VC and the River program staff would provide administrative services out of the district office.	A new VC would be constructed at Hog Creek. The Rand staff would provide customer services out of the new VC. The River program staff would provide administrative services out of the district office.	A new VC would be constructed in Rand. The Rand staff would provide customer services out of the new VC. The River program staff would provide administrative services out of the district office.	A new VC would be constructed in Rand. The Rand and River program staff would provide customer and administrative services out of the new VC.



**Table S-2. Summary of Environmental Consequences**

	Alternative A Fewer Watercraft & Less Visitor Use	Alternative B Current Management/ No Action	Alternative C Angler & Floater Enhancement/More Watercraft & More Visitor Use	Alternative D Maximum Watercraft and Visitor Use	Alternative E Preferred Alternative
<b>Outstandingly Remarkable Values</b>					
<b>Natural Scenic     Qualities</b>	Minimal/Neutral effect.	Minimal/Neutral effect.	Minimal/Neutral effect.	Minimal/Neutral effect.	Minimal/Neutral effect.
<b>Fisheries</b>	Minimal/Neutral effect.	Minimal/Neutral effect.	Minimal/Neutral effect.	Minimal/Neutral effect.	Minimal/Neutral effect.
<b>Recreation</b>	Minimal/Neutral effect.	Minimal/Neutral effect.	Minimal/Neutral effect.	Minimal/Neutral effect.	Minimal/Neutral effect.
<b>Air</b>	Minimal/Neutral effect.	Minimal/Neutral effect.	Minimal/Neutral effect.	Minimal/Neutral effect.	Minimal/Neutral effect.
<b>Fire</b>	Beneficial effect.	Adverse effect.	Adverse effect.	Adverse effect.	Adverse effect.
<b>Soils</b>	Beneficial effect.	Minimal/Neutral effect	Minimal/Neutral effect	Adverse effect.	Minimal/Neutral effect.
<b>Water</b>	Beneficial effect.	Minimal/Neutral effect	Minimal/Neutral effect.	Adverse effect.	Minimal/Neutral effect.
<b>Riparian Areas, Wetlands and Floodplains</b>	Minimal/Neutral effect.	Minimal/Neutral effect.	Minimal/Neutral effect.	Minimal/Neutral effect.	Minimal/Neutral effect.
<b>Fisheries</b>	Minimal/Neutral effect.	Minimal/Neutral effect.	Minimal/Neutral effect.	Adverse effect.	Minimal/Neutral effect.
<b>Scenery</b>	Minimal/Neutral effect.	Minimal/Neutral effect.	Minimal/Neutral effect.	Minimal/Neutral effect.	Minimal/Neutral effect.
<b>Motorized Boaters</b>	Adverse effect.	Minimal/Neutral effect.	Adverse effect.	Beneficial effect.	Minimal/Neutral effect.
<b>Nonmotorized Boaters</b>	Beneficial effect.	Minimal/Neutral effect.	Minimal/Neutral effect.	Minimal/Neutral effect.	Minimal/Neutral effect.



**Table S-2. Summary of Environmental Consequences**

	<b>Alternative A</b> Fewer Watercraft & Less Visitor Use	<b>Alternative B</b> Current Management/ No Action	<b>Alternative C</b> Angler & Floater Enhancement/More Watercraft & More Visitor Use	<b>Alternative D</b> Maximum Watercraft and Visitor Use	<b>Alternative E</b> Preferred Alternative
<b>Boat Anglers</b>	Beneficial effect.	Minimal/Neutral effect.	Minimal/Neutral effect.	Adverse effect.	Minimal/Neutral effect.
<b>Bank Anglers</b>	Beneficial effect.	Minimal/Neutral effect.	Minimal/Neutral effect.	Minimal/Neutral effect.	Minimal/Neutral effect.
<b>Campers</b>	Minimal/Neutral effect.	Minimal/Neutral effect.	Minimal/Neutral effect.	Minimal/Neutral effect.	Minimal/Neutral effect.
<b>Trail Users</b>	Minimal/Neutral effect.	Minimal/Neutral effect.	Minimal/Neutral effect.	Beneficial effect.	Beneficial effect.
<b>Other Recreational Users</b>	Minimal/Neutral effect.	Minimal/Neutral effect.	Minimal/Neutral effect.	Minimal/Neutral effect.	Minimal/Neutral effect.
<b>Boating Safety</b>	Adverse effect.	Beneficial effect.	Beneficial effect.	Beneficial effect.	Beneficial effect.
<b>Visitor Use</b>	Minimal/Neutral effect.	Minimal/Neutral effect.	Minimal/Neutral effect.	Minimal/Neutral effect.	Minimal/Neutral effect.
<b>Law Enforcement</b>	Minimal/Neutral effect.	Minimal/Neutral effect.	Minimal/Neutral effect.	Adverse effect.	Minimal/Neutral effect.
<b>Outfitter Services</b>	Adverse effect.	Minimal/Neutral effect.	Minimal/Neutral effect.	Minimal/Neutral effect.	Minimal/Neutral effect.
<b>Landowners</b>	Beneficial effect.	Minimal/Neutral effect.	Minimal/Neutral effect.	Adverse effect.	Minimal/Neutral effect.
<b>Sound</b>	Beneficial effect.	Minimal/Neutral effect.	Beneficial effect	Adverse effect.	Minimal/Neutral effect.
<b>Transportation</b>	Minimal/Neutral effect.	Minimal/Neutral effect.	Minimal/Neutral effect.	Minimal/Neutral effect.	Minimal/Neutral effect.
<b>Socioeconomics</b>	Adverse effect.	Minimal/Neutral effect.	Minimal/Neutral effect.	Beneficial effect.	Minimal/Neutral effect.
<b>Management Costs</b>	Minimal/Neutral effect.	Minimal/Neutral effect.	Minimal/Neutral effect.	Adverse effect.	Minimal/Neutral effect.
<b>Gross Revenues</b>	Adverse effect.	Minimal/Neutral effect.	Adverse effect.	Beneficial effect.	Minimal/Neutral effect.



**Table S-3. Primary Issues of Concern by Alternative**

	<b>Alternative A</b>	<b>Alternative B</b>	<b>Alternative C</b>	<b>Alternative D</b>	<b>Alternative E</b>
	Significantly reduces watercraft use levels. Provides recreation opportunities in a less crowded setting. Fees and permits are required for all user groups. Limitation on commercial permits.	Continue present use levels and management methods. Motorized use remains static while nonmotorized continues to grow. Permits are required for commercial use only.	More floatcraft and visitor use. Enhances floating and angling experience. Minimizes potential impacts to fisheries. Further restricts motorized use. Permits are required for all user groups.	Maximizes all types of recreation uses. Recreation use levels increase causing a high degree of interaction among user groups. Fees and permits are required for all watercraft users.	Recreation uses are not restricted. Enhances floating and angling experience. Minimizes potential impacts to fisheries. Further restricts motorized use. Permits are not required for private users.
<b>Motorized</b> (MTBs- motorized tour boats.)	<p>Reduce motorized use to 1985 levels. MTBs- 12 trips/day.</p> <p>Dunn Reach trip is 8, except on July 4<sup>th</sup> and weekends in July and August when it is 4 trips.</p> <p>4 permits.</p>	<p>Present use levels. MTBs- 19 trips/day.</p> <p>Dunn Reach trip is 19, except on July 4<sup>th</sup> and weekends in July and August when it is 6 trips.</p> <p>2 permits.</p>	<p>Reduce motorized use to 1985 levels. MTBs- 12 trips/day.</p> <p>Dunn Reach trip is 8, except on July 4<sup>th</sup> and weekends in July and August when it is 4 trips before noon.</p> <p>2 permits.</p>	<p>Increase use levels. MTBs- 26 trips/day.</p> <p>Dunn Reach trip is 16, except on July 4<sup>th</sup> and weekends in July and August when it is 8 trips.</p> <p>4 permits.</p>	<p>Present use levels. MTBs- 19 trips/day.</p> <p>Dunn Reach trip is 8, except on July 4<sup>th</sup> and weekends in July and August when it is 4 trips before noon.</p> <p>4 permits.</p>



<b>Nonmotorized</b>	<p>Boat angling limitations to 1985 levels. Sets maximum of 120 floatcraft/day 9 (split 50/50 between private and commercial boaters).</p> <p>Boat angling year-round in Applegate and Dunn reaches.</p>	<p>No regulations.</p> <p>Boat angling year-round in Applegate and Dunn reaches.</p>	<p>No regulations.</p> <p>Boat angling year-round in Applegate and Dunn reaches.</p>	<p>No regulations.</p> <p>Boat angling year-round in Applegate and Dunn reaches.</p>	<p>No regulations.</p> <p>Boat angling year-round in Applegate and Dunn reaches.</p>
<p><b>New Recreation Development</b> (primitive areas are without improvements and developed areas are with trash cans, toilets, etc.).</p> <p><b>Visitor Services (VC)</b></p>	<p>None.</p> <p>Construct a new VC in Merlin or Grants Pass.</p>	<p>None.</p> <p>No change.</p>	<p>Some new development (approx. 7 new primitive areas and 8 developed areas).</p> <p>Construct a new VC at Hog Creek.</p>	<p>Many new developments (approx. 7 new primitive areas and approx. 18 developed areas).</p> <p>Construct a new VC at Rand.</p>	<p>Some new developments (approx. 6 new developed areas).</p> <p>Construct a new VC at Rand.</p>
<b>New Trails</b>	One.	None.	Three.	Nine.	Five.
<b>Limited OHV Areas</b>	Two.	Four.	Eight.	Thirteen.	Five



# Table of Contents

Chapter 1	
Introduction .....	1
Purpose and Need for Action .....	3
The Planning Area .....	3
Relationship to Legislation, BLM Policies, Plans and Programs .....	3
Management Goals and Standards for the Hellgate Recreation Area .....	5
Relationship to Other Policies, Plans, and Programs .....	8
Decisions to be Made .....	11
Monitoring and Evaluation .....	14
Analysis Files .....	15
Chapter 1	
Table, Map and Figure .....	17
Chapter 2	
Alternatives .....	23
Planning Issues .....	25
Motorized Boating .....	25
Nonmotorized Float Boating .....	25
Nonmotorized Boat Angling .....	26
User Fees .....	26
Recreational Opportunities .....	26
How and Where Should Camping be Managed? .....	26
How and Where Should a Trail System be Managed? .....	27
What Type of Day-Use Areas Should be Provided? .....	27
What Action Should be Taken to Manage Public Access? .....	27
What Action Should be Taken to Provide Visitor Services? .....	27
Alternative Development Process .....	27
Alternatives Analyzed in Detail .....	28
Alternative A: Fewer Watercraft and Less Visitor Use .....	28
Alternative B: No Action or Current Management/Watercraft and Visitor Use as it is Now ....	28
Alternative C: Angler and Floater Enhancement/More Watercraft and Visitor Use .....	29
Alternative D: Maximum Watercraft and Visitor Use .....	29
Alternative E: The Preferred Alternative .....	29
Alternative A: Fewer Watercraft and Less Visitor Use .....	30
All Watercraft Use .....	30
Sound Management Areas .....	30
Angling Enhancement Areas .....	30
Fall Chinook Spawning/Sensitive Areas .....	30
Safety Sites of Concern .....	30
All Motorized Boating .....	31



Season of Use .....	31
Erosion Sensitive Areas .....	31
River Reach .....	31
Thrill Power Maneuver Areas .....	31
Boat Speed .....	31
Two-Way Radio Communications .....	31
Private Motorized Boating .....	31
Allocation/Limits .....	31
Season of Use/River Reach .....	32
Commercial Motorized Boat Angling .....	32
Season of Use .....	32
Allocation/Limits .....	32
Number of Permits .....	32
Boat Size .....	32
Commercial Motorized Tour Boating .....	32
Season of Use .....	32
Allocation/Limits in the Applegate Reach .....	32
Allocation/Limits in the Dunn Reach .....	32
Safety Sites of Concern .....	33
Groups/Runs .....	33
Boat Size .....	33
Number of Permits .....	33
Notice Displays .....	33
Off Plane Procedures .....	33
Annual Daily Schedule .....	33
Daily Use .....	34
Special Motorized Boating Events .....	34
Allocation/Limits .....	34
River Reach .....	34
Number of Permits .....	34
New Specialized Motor Boat Events .....	34
Nonmotorized Float Boating .....	34
Allocation/Limits .....	34
Nonmotorized Boat Angling .....	35
Allocation/Limits .....	35
Season of Use/River Reach .....	35
Boater Fees and Permits and User Fees .....	35
Commercially-Guided Watercraft .....	35
Watercraft for Private Use .....	35
User Fees .....	35
Recreational Opportunities .....	35
Camping .....	35
Trails .....	36
Day-Use Areas .....	37
Public Access .....	37
Visitor Services .....	38
Alternative B - Current Management/No Action .....	38
All Watercraft Use .....	38
Sound Management Areas .....	38
Angling Enhancement Areas .....	39
Fall Chinook Spawning/Sensitive Areas .....	39
Safety Sites of Concern .....	39
All Motorized Boating .....	39
Season of Use .....	39
Erosion Sensitive Areas .....	39
River Reach .....	39



Thrill Power Maneuver Areas .....	39
Boat Speed .....	39
Two-Way Radio Communications .....	40
Private Motorized Boating .....	40
Allocation/Limits .....	40
Season of Use/River Reach .....	40
Commercial Motorized Boat Angling .....	40
Season of Use .....	40
Allocation/Limits .....	40
Number of Permits .....	40
Boat Size .....	40
Commercial Motorized Tour Boating .....	40
Season of Use .....	40
Allocation/Limits in the Applegate Reach .....	41
Allocation/Limits in the Dunn Reach .....	41
Safety Sites of Concern .....	41
Groups/Runs .....	41
Boat Size .....	41
Number of Permits .....	41
Notice Displays .....	41
Off Plane Procedures .....	42
Annual Daily Schedule .....	42
Daily Use .....	42
Special Motorized Boating Events .....	42
Allocation/Limits .....	42
River Reach .....	42
Number of Permits .....	42
New Special Motorized Boating Events .....	42
Nonmotorized Float Boating .....	42
Allocation/Limits .....	42
Nonmotorized Boat Angling .....	43
Allocation/Limits .....	43
Season of Use/River Reach .....	43
Boater Fees and Permits and User Fees .....	43
Commercially-Guided Watercraft .....	43
Watercraft for Private Use .....	43
User Fees .....	43
Recreational Opportunities .....	43
Camping .....	43
Trails .....	44
Day-Use Areas .....	44
Public Access .....	45
Visitor Services .....	46
Alternative C - Angler and Floater Enhancement/More Watercraft and Visitor Use .....	46
All Watercraft Use .....	46
Sound Management Areas .....	46
Angling Enhancement Areas .....	47
Fall Chinook Spawning/Sensitive Areas .....	47
Safety Sites of Concern .....	47
All Motorized Boating .....	47
Season of Use .....	47
Erosion Sensitive Areas .....	47
River Reach .....	48
Thrill Power Maneuver Areas .....	48
Boat Speed .....	48
Two-Way Radio Communications .....	48



Private Motorized Boating .....	48
Allocation/Limits .....	48
Season of Use/River Reach .....	48
Commercial Motorized Boat Angling .....	49
Season of Use .....	49
Allocation/Limits .....	49
Number of Permits .....	49
Boat Size .....	49
Commercial Motorized Tour Boating .....	49
Season of Use .....	49
Allocation/Limits in the Applegate Reach .....	49
Allocation/Limits in the Dunn Reach .....	50
Safety Sites of Concern .....	50
Groups/Runs .....	50
Boat Size .....	50
Number of Permits .....	50
Notice Displays .....	50
Off Plane Procedures .....	50
Annual Daily Schedule .....	51
Daily Use .....	51
Special Motorized Boating Events .....	51
Allocation/Limits .....	51
River Reach .....	51
Number of Permits .....	51
New Specialized Motor Boat Events .....	51
Nonmotorized Float Boating .....	51
Allocation/Limits .....	51
Nonmotorized Boat Angling .....	52
Allocation/Limits .....	52
Season of Use/River Reach .....	52
Boater Fees and Permits and User Fees .....	52
Commercially-Guided Watercraft .....	52
Watercraft for Private Use .....	52
User Fees .....	52
Recreational Opportunities .....	53
Camping .....	53
Trails .....	53
Day-Use Areas .....	54
Public Access .....	55
Visitor Services .....	55
Alternative D - Maximum Watercraft and Visitor Use .....	56
All Watercraft Use .....	56
Sound Management Areas .....	56
Angling Enhancement Areas .....	56
Fall Chinook Spawning/Sensitive Areas .....	56
Safety Sites of Concern .....	57
All Motorized Boating .....	57
Season of Use .....	57
Erosion Sensitive Areas .....	57
River Reach .....	57
Thrill Power Maneuver Areas .....	57
Boat Speed .....	57
Two-Way Radio Communications .....	58
Private Motorized Boating .....	58
Allocation/Limits .....	58



Season of Use/River Reach .....	58
Commercial Motorized Boat Angling .....	58
Season of Use .....	58
Allocation/Limits .....	58
Number of Permits .....	58
Boat Size .....	58
Commercial Motorized Tour Boating .....	59
Season of Use .....	59
Allocation/Limits in the Applegate Reach .....	59
Allocation/Limits in the Dunn Reach .....	59
Safety Sites of Concern .....	59
Groups/Runs .....	59
Boat Size .....	59
Number of Permits .....	60
Notice Displays .....	60
Off Plane Procedures .....	60
Annual Daily Schedule .....	60
Daily Use .....	60
Special Motorized Boating Events .....	60
Allocation/Limits .....	60
River Reach .....	60
Number of Permits .....	60
New Specialized Motor Boat Events .....	61
Nonmotorized Float Boating .....	61
Allocation/Limits .....	61
Nonmotorized Boat Angling .....	61
Allocation/Limits .....	61
Season of Use/River Reach .....	61
Boater Fees and Permits and User Fees .....	61
Commercially-Guided Watercraft .....	61
Watercraft for Private Use .....	61
User Fees .....	62
Recreational Opportunities .....	62
Camping .....	62
Trails .....	62
Day-Use Areas .....	63
Public Access .....	64
Visitor Services .....	65
Alternative E - Preferred Alternative .....	65
All Watercraft Use .....	65
Sound Management Areas .....	65
Angling Enhancement Areas .....	65
Fall Chinook Spawning/Sensitive Areas .....	66
Safety Sites of Concern .....	66
All Motorized Boating .....	66
Season of Use .....	66
Erosion Sensitive Areas .....	66
River Reach .....	66
Thrill Power Maneuver Areas .....	66
Boat Speed .....	67
Two-Way Radio Communications .....	67
Private Motorized Boating .....	67
Allocation/Limits .....	67
Season of Use/River Reach .....	67
Commercial Motorized Boat Angling .....	67
Season of Use .....	67



Allocation/Limits .....	68
Number of Permits .....	68
Boat Size .....	68
Commercial Motorized Tour Boating .....	68
Season of Use .....	68
Allocation/Limits in the Applegate Reach .....	68
Allocation/Limits in the Dunn Reach .....	68
Safety Sites of Concern .....	69
Groups/Runs .....	69
Boat Size .....	69
Number of Permits .....	69
Notice Displays .....	69
Off Plane Procedures .....	69
Annual Daily Schedule .....	69
Daily Use .....	70
Special Motorized Boating Events .....	70
Allocation/Limits .....	70
River Reach .....	70
Number of Permits .....	70
New Specialized Motor Boat Events .....	71
Nonmotorized Float Boating .....	71
Allocation/Limits .....	71
Nonmotorized Boat Angling .....	71
Allocation/Limits .....	71
Season of Use/River Reach .....	71
Boater Fees and Permits and User Fees .....	71
Commercially-Guided Watercraft .....	71
Watercraft for Private Use .....	71
User Fees .....	72
Recreational Opportunities .....	72
Camping .....	72
Trails .....	73
Day-Use Areas .....	73
Public Access .....	74
Visitor Services .....	75
Alternatives Considered but Eliminated From Detailed Study .....	75
Chapter 2	
Tables, Map and Figures .....	81
Chapter 3	
Affected Environment .....	111
The River's Physical Environment .....	113
Assessment of Outstandingly Remarkable Values .....	113
Climate .....	115
Air Resources .....	115
Fire .....	117
Soils .....	119
Water Resources .....	119



Riparian Areas, Wetlands, and Flood Plains .....	121
Fisheries .....	123
Wildlife .....	127
Scenery .....	133
Motorized Boaters .....	133
Nonmotorized Boat Floaters .....	137
Boat Anglers .....	140
Bank Anglers .....	142
Recreational Opportunities .....	143
Camping .....	143
Trails .....	144
Public Access .....	144
Fees .....	145
Visitor Services .....	145
Boating Safety .....	146
Visitor Use .....	148
Law Enforcement/Emergency Services .....	150
Guided and Outfitter Services .....	150
Landowners .....	151
Sound .....	152
Transportation .....	154
Socioeconomics .....	155
Management Costs .....	156
Gross Revenue .....	156
Chapter 3	
Tables, Maps, and Figures .....	159
Chapter 4	
Environmental Consequences .....	187
Effects on Outstandingly Remarkable Values .....	189
Natural Scenic Qualities .....	189
Fisheries .....	189
Recreation .....	189
Environmental Effects .....	190



Effects on Air Resources .....	191
Effects on Fire .....	192
Effects on Soils .....	194
Effects on Water .....	196
Effects on Riparian Areas, Wetlands, and Flood Plains .....	198
Effects on Fisheries .....	198
Effects on Wildlife .....	200
Effects on Scenery .....	206
Effects on Motorized Boaters .....	206
Effects on Nonmotorized Boat Floaters .....	207
Effects on Boat Anglers .....	214
Effects on Bank Anglers .....	217
Effects on Campers .....	220
Effects on Trail Users .....	222
Effects on Other Recreational Users .....	223
Effects on Visitor Services .....	225
Effects on ORV's .....	226
Effects on Site Locations .....	226
Effects on Boating Safety .....	226
Effects on Visitor Use .....	226
Effects on Law Enforcement and Emergency Services .....	227
Effects on Outfitter Services .....	227
Effects on Landowners .....	228
Effects on Sound .....	230
Effects on Transportation .....	230
Effects on Socioeconomics .....	231
Effects on Management Costs .....	233
Effects on Gross Revenues .....	236



Chapter 4	
Tables .....	237
Chapter 5	
Consultation and Coordination .....	249
List of Preparers .....	251
List of Agencies and Organizations Contacted and to Whom Copies of the Draft	
RAMP/EIS Have Been Sent .....	253
Public Involvement .....	255
Scoping Processes .....	255
BLM Public Outreach .....	258
Bibliography .....	263
Glossary .....	271
Appendices .....	291
Appendix A	
Federal Register 1972 .....	293
Appendix B	
Outstandingly Remarkable Values .....	307
Appendix C	
Management Standards for the Hellgate Recreation Area, A Recreational Area .....	319
Appendix D	
Resource Activities and Land Uses .....	339
Appendix E	
Recreation Opportunity Spectrum Inventory .....	347
Appendix F	
Botanical Resources Background Paper .....	357
Appendix G	
Fisheries Methodology and Assumptions .....	371
Appendix H	
Other Maps .....	377
Potential Camping and Day-Use Sites .....	381
Potential Trails .....	383
Appendix I	
Visitor Center Site Locations .....	387







## Purpose and Need for Action

# Chapter 1 Introduction

The purpose of this action is to... The purpose of this action is to... The purpose of this action is to...

The need for this action is that... The need for this action is that... The need for this action is that...

## The Planning Area

The Hellgate River Planning Area... The Hellgate River Planning Area... The Hellgate River Planning Area...



Hellgate Canyon - photo by Jim Leffmann







# Purpose and Need for Action

The purpose of the action is to align management guidelines and recreational use levels to achieve the purposes of Public Law 90-542, October 2, 1968, the Wild and Scenic Rivers Act (see section 501 (d)(1) USC 1986). This recreation area management plan/draft environmental impact statement will supplement several program activity components of the BLM Medford District Resource Management Plan (RMP) (see Chapter 1, Decisions to be Made) (USDI 1972).

The need to revise the plan is due to an increase of conflicts among river users, particularly between jet boaters and boat floaters during the summer months and between jet boaters and anglers in the fall fishing season. BLM visitor-use reports, a recreation use study (Shindler and Shelby 1993), and scoping efforts (Walker and Littlefield 1993) show major increases in annual visitors from approximately 12,000 in 1968 to approximately 110,000 in 1991. The range of alternatives listed in this document are designed to address the purpose and need for this environmental impact statement (see Chapter 2, Alternatives Analyzed in Detail).

## The Planning Area

The Hellgate Recreation Area, also referred to as the planning area, covers approximately 8,000 acres in southwestern Oregon administered by the BLM Medford District Office (see Map 1-1 and Appendix A). The Hellgate Recreation Area, the first 27 miles of the National Wild and Scenic Rogue River, is classified as a recreational river area (see Figure 1-1). A recreational river is defined by Congress as a river that is readily accessible by road or railroad, that may have some development on its shoreline, and may have been impounded or diverted in the past. Management of this recreational river area will give primary emphasis to protecting the values that make it outstandingly remarkable while providing a diversity of river-related recreational opportunities in a developed setting.

The Hellgate Recreation Area is located within Josephine County, Oregon. Approximately 70 percent (5,500 acres) is managed by BLM (see Table 1-1).

## Relationship to Legislation, BLM Policies, Plans and Programs

In 1968, the United States Congress designated the U.S. Forest Service and the BLM as the lead agencies for managing the land and water within the identified National Wild and Scenic Rogue River corridor (84 miles from its confluence with the Applegate River downstream to the Lobster Creek Bridge). The portion of the river from the mouth of the Applegate River downstream to Marial, a distance of approximately 47 miles, is administered by the BLM, Medford District Office. The lower 37 miles are located within the boundaries of the Siskiyou National Forest and are administered by the U.S. Forest Service.

Management of the Hellgate Recreation Area is guided by numerous legal requirements and by established management direction. Correspondingly, the revision of the recreation area management plan (RAMP) requires that management direction be embodied in the plan.



# Legislated Requirements and Management Direction

The Federal Land Management Policy Act of 1976 and associated BLM planning regulations (43 CFR 1600, 8351.2) and manuals set forth the process for amending, and tiering to, a resource management plan.

The National Environmental Policy Act (NEPA) of 1969 and the Council of Environmental Quality's National Environmental Policy Act regulations (40 CFR 1500) provide the basic national charter for protection of the environment and analysis of major Federal actions. The NEPA process is the analytical tool used to analyze the proposed actions of the Federal government.

The Wild and Scenic Rivers Act of 1968 established the wild and scenic rivers system (Public Laws 90-542 and 99-590). Section 10(a) of the Act requires emphasis and protection be given to the aesthetic, scenic, historic, archaeologic, and scientific features of the river, which caused it to be included in the Act. The Act limits other uses to those that do not substantially interfere with public use and enjoyment of these values (see Analysis Files for a copy of the Act). The Wild and Scenic Rivers Act requires that a comprehensive river management plan be prepared to provide for the protection of the river's outstandingly remarkable values (see Chapter 3, Assessment of Outstandingly Remarkable Values, and Appendix B). The Act requires that the plan address resource protection, development of land and facilities, user capacities, and other management practices as needed. River management plans must complement existing federal land use plans for the area.

The Americans with Disabilities Act of 1990 (ADA) also provides direction for management of the river. This ensures a national mandate to eliminate discrimination against individuals with disabilities. The ADA essentially extends to the private sector the rights and protections already prohibiting discrimination on the basis of disability in federal government and federally assisted programs as mandated by the Architectural Barriers Act and Section 504. See Chapter 3, Motorized Tour Boats.

The Archaeological Resources Protection Act of 1979 provides for the protection of archaeological resources and sites on public lands.

Congress enacted the Endangered Species Act (ESA) to provide a means whereby the ecosystems, upon which endangered species and threatened species depend, may be conserved, and to provide a program for the conservation of such species. Federal land managers and other federal agencies must ensure that their activities do not jeopardize the continued existence of listed species or adversely modify habitat critical to those species (see Chapter 3, Fisheries and Wildlife).

## Medford District Resource Management Plan

The Hellgate RAMP will not amend the BLM Medford District RMP. The Hellgate RAMP is an activity plan in conformance with the BLM Medford District RMP. The following program activity components represent land use allocations or management direction contained in the RMP: 1) activity components not present in the Hellgate Recreation Area, and 2) present activity components with a prescription provided in the RMP.

An amendment determination for the BLM Medford District RMP is not necessary because:

1. These resources are not present in the Hellgate Recreation Area: coal, livestock grazing, wild horse and burro management, and wilderness study areas.
2. These resources have management direction for all land use or specific land use allocations and are managed according to the RMP: survey and manage species, protection buffer species, riparian reserves, late-successional reserves, managed late-successional areas, and matrix allocations.



3. These resources have program direction and are managed according to the RMP: air quality, water and soil, wildlife habitat, fisheries habitat, special status and special attention species habitat, special areas, forest health, recreation, visual resources, cultural resources (including Native American values), timber resources, special forest products, energy and minerals, socioeconomic conditions, lands, land tenure adjustments, rights-of-way, access, withdrawals, roads, rural interface areas, fire management, noxious weeds, and hazardous materials.

BLM regulations require that a recreation area management plan (RAMP) be consistent with officially-approved or adopted resource-related plans, policies, and procedures contained therein, of other federal agencies, state and local governments, and Indian tribes, so long as the guidance and the RAMP are also consistent with the purposes, policies, and programs of federal laws and regulations applicable to public lands (43 CFR 1610.3-2).

## **Northwest Forest Plan**

The Hellgate RAMP is consistent with the *Final Supplemental Environmental Impact Statement (FSEIS) on Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl* (USDA, USFS; USDI, BLM 1994). It is consistent with the Aquatic Conservation Strategy, a strategy designed to maintain and restore the productivity and resiliency of riparian and aquatic ecosystems.

## **Noxious Weed Control and Management**

The control and management of noxious weeds for all alternatives will be directed by and conform to the Medford District's Integrated Weed Management Plan and Environmental Assessment (EA) #OR-110-98-14, tiered to the Northwest Area Noxious Weed Control Program Environmental Impact Statement prepared December 1985 and amended March 1987.

# **Management Goals and Standards for the Hellgate Recreation Area Rogue Wild and Scenic River**

The following explains how the management objectives and standards for the planning area will be met (see Appendix C). The objectives and standards are applicable to all alternatives (see App. 2-WS-2 BLM Medford Draft RMP/EIS).

## **Management Standards**

Recreation facilities may be established in proximity to the river, although recreational river classification does not require extensive recreational development. Recreational facilities may be kept to a minimum with visitor services provided outside the river area. Future construction of impoundments, diversions, straightening, channeling, and other modifications to the waterway or adjacent lands would not be permitted, except in instances where such developments would not have direct or adverse effects on the river or its immediate environment. Appendix C addresses the program management standards that apply to the Hellgate Recreation Area.



# Management Goals and Objectives

## Goals

The management goal is to provide for diversified recreational opportunities within the Hellgate Recreation Area consistent with the National Wild and Scenic Rivers Act. Management actions seek to minimize conflicts between the desires of recreational user groups and their potential effects on other ecological components within or adjacent to the Hellgate Recreation Area. See Appendix B and Appendix C.

## Objectives

Management of the Hellgate Recreation Area will give primary emphasis to protecting the values that make it outstandingly remarkable, while providing river-related outdoor recreation opportunities in a developed setting (see Appendix 2-WS-2, BLM Medford Draft RMP/EIS). See Appendix C, Management Standards for the Hellgate Recreation Area.

- \* Provide for widely diverse recreational opportunities.
- \* Minimize hazards and unsafe situations.
- \* Optimize recreational experiences within the river corridor.
- \* Minimize conflicts with state- or federally-listed threatened or endangered flora and fauna, cultural resources, Native American religious sites, or historical sites.
- \* Cooperate fully with other landowners and regulatory agencies within the Hellgate Recreation Area.

The basic distinctions between a scenic and a recreational river area are the degree of accessibility to the river, extent of shoreline development, existence of impoundment or diversion, and types of land use.

## National Wild and Scenic Rivers Act

The Wild and Scenic Rivers Act established a method for providing federal protection for certain remaining free-flowing rivers and preserving them and their immediate environments for the use and enjoyment of present and future generations. Rivers are included in the system so they may benefit from the protective management and control of development for which the Act provides (see Appendix 2-WS-2, BLM Medford Draft RMP/EIS).

Section 10(a) of the Act states that:

“Each component of the National Wild and Scenic Rivers System shall be administered in such a manner as to protect and enhance the values which caused it to be included in said system without, insofar as is consistent therewith, limiting other uses that do not substantially interfere with public use and enjoyment of these values. In such administration, primary emphasis shall be given to protecting its esthetic, scenic, historic, archaeological, and scientific features. Management plans for any such component may establish varying degrees of intensity for its protection and development, based on the special attributes of the area.”

This section is interpreted by the Secretaries of the Interior and Agriculture as meaning that all designated river areas, regardless of classification, will be enhanced and not degraded.

Recreational rivers are defined by the Act to be “Those rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past.”



## Outstandingly Remarkable Values

The Rogue River was one of eight rivers identified as part of the National Wild and Scenic Rivers System when the Wild and Scenic Rivers Act was passed in 1968. Designated rivers are classified as wild, scenic, or recreational. The original eight rivers were "instant designation" rivers; they were not study rivers. The Hellgate Recreation Area was classified as a recreational river; it was never designated a study river. Outstandingly remarkable values (ORVs) have never been identified in a formal planning process prior to this effort (see Chapter 3, Assessment of Outstandingly Remarkable Values and Appendix B).

A BLM/Forest Service interdisciplinary team has determined the following values of the Rogue National Wild and Scenic River to be outstandingly remarkable:

**Natural Scenic Qualities.** Interesting varieties of scenery due to the diversity of vegetation, geology, and topography.

**Fisheries Resource.** Salmon and steelhead populations and habitat.

**Recreational Opportunities.** White water floating, fishing, jet boating, camping, hiking, swimming, and sightseeing.

## Management Constraints on Private Lands

Designation of a river under the National Wild and Scenic Rivers Act gives the federal government no authority to zone private lands. Zoning on private lands is solely a matter of state and local regulations. Although the National Wild and Scenic Rivers (W&SRs) Act includes provisions to encourage the protection of ORVs through state and governmental land use planning, these provisions are not binding on local governments. The federal government is responsible for assuring that designated rivers are managed in a manner that meets the intent of the National W&SRs Act.

River management plans may prescribe land use or development limitations to protect outstandingly remarkable river values. Many uses may be compatible with a wild, scenic, or recreational classification as long as the rivers are administered to protect and enhance the values that caused them to be included in the national system. Most existing uses and activities on adjoining private lands may continue.

**Supplemental Information.** Timber harvest activities on private lands within a designated river boundary would continue to be regulated by the Oregon Forest Practices Act and BLM's Scenic Easement Program.

The primary consideration in any river or land use limitation would be the protection and enhancement of a designated river's ORVs. The BLM will work closely with landowners to assure that all uses will be consistent with the intent of the Act. Those uses that clearly threaten identified ORVs would be addressed on a case-by-case basis.

Specific management goals for new buildings, other structures, or road construction on private lands along designated rivers would be addressed through the individual river management plans. Federal guidelines allow different degrees of development along rivers depending on their classification. In consultation with landowners involved, every effort would be made to reduce adverse effects to an acceptable level on proposals for major up-grading, realignment, or new construction of roads. Maintenance of existing roads generally would not alter a river's condition and thus would not be restricted.

On the BLM-administered Rogue River, BLM has acquired specific development rights necessary to prevent any threat to the river's identified ORVs.



The Act specifically prohibits the use of condemnation in the fee title purchase of lands if 50 percent or more of the land within the boundary is already in public ownership. While the Act provides the federal government with authority to purchase scenic, conservation, or access easements through condemnation proceedings, this is considered to be a measure of last resort. In the event condemnation is considered necessary, the only landowner rights purchased would be those considered necessary to prevent the threat to the river or its outstandingly remarkable values.

If BLM acquires an easement on private land, depending upon its terms and conditions, public access rights may or may not be involved. For example, a scenic easement could involve only the protection of resource values with no provisions for public use. A trail or road easement would involve public use provisions. Any provisions for public use of private lands must be specifically purchased from the landowner. BLM would work closely with landowners to minimize public use of nonfederal lands through brochures, maps, signs, or other appropriate means, except in locations where rights to such use have been acquired.

River designation does not affect a private landowner's rights to control trespass. Landowners can charge a fee for crossing private lands to fish designated rivers, except where a public access easement exists. The designation of a river into the National Wild and Scenic Rivers System does not change landowner rights unless all or a portion of the rights are acquired from the landowner.

On navigable rivers, the riverbed and banks to the mean high water mark are owned by the state and are available for public use under state laws. Private landowners control public access to their property along the banks of non-navigable rivers. The designation of a river into the National Wild and Scenic Rivers System has no bearing upon its determination of navigability.

Ownership and use of valid water rights are not affected by a federal river designation.

## **Relationship to Other Policies, Plans, and Programs**

The lead federal agencies acknowledge that the land and water resources within the wild and scenic corridor are managed by a host of local, regional, state, and other federal agencies (Walker 1993). The agencies would coordinate their activities to assure effective and efficient management and facilitate public understanding and support. Often the legislative authorities granted to agencies create overlapping responsibilities in some areas while leaving management gaps in others.

### **State of Oregon**

In 1970, this same 84-mile segment was designated as a component of the Oregon State Scenic Waterways System, which is administered by the Oregon Parks and Recreation Department.

### **Oregon State Scenic Waterways Act**

In 1969, the State of Oregon passed the Oregon Scenic Waterways Act. This legislation established a program to protect state-designated rivers throughout Oregon. Its goals are to protect the free-flowing character of designated rivers for fish, wildlife, and recreation. Dams, reservoirs, impoundments, and placer mining are prohibited on state scenic waterways. The Oregon Act requires review of new developments along designated rivers, but does not affect existing water rights, developments, or uses.



Scenic waterways are administered by the Oregon parks and Recreation Commission in accordance with Oregon Revised Statutes (ORS) 390.805 to 390.925. Oregon Administrative Rules (OAR) have been adopted to govern the program. General rules set forth generic standards that apply to all scenic waterways. Specific rules are also developed for each river during the management planning process. These rules are designed to manage development within the scenic waterway corridor to maintain the natural beauty of the river.

The Scenic Waterways Act and rules require evaluation of proposed land development, improvement or alteration relative to the scenic and aesthetic beauty of the waterway as viewed from the river. This review and evaluation apply to all related adjacent lands, defined as lands within one-quarter mile of the banks of the scenic waterway. Landowners wanting to build houses or roads, cut timber, mine or pursue other similar projects, must make written notification to the Oregon Parks and Recreation Department (OPRD). OPRD reviews the proposal in coordination with other jurisdictions and determines if the proposal will substantially impair the natural beauty of the scenic waterway. When a project is inconsistent with scenic waterway goals, OPRD works with the landowner to resolve conflicts. The commission has one year from the date of initial notification in which to reach accommodation with the landowner. This may include revising the project or compensating the landowner by purchasing the land or resource or negotiating a scenic easement. If satisfactory resolution is not reached within one year, the landowner may proceed with the initial development proposal.

Local and state agencies must comply with the scenic waterway law and rules. Federal land managing agencies are encouraged to coordinate with OPRD to insure their own land management actions are compatible with scenic waterway management prescriptions.

## **Oregon Department of Fish and Wildlife**

State of Oregon fishing regulations, such as bag limits, season-of-use, catch and release, and barbless hooks, also have a major impact on the fishing experience. Fishing regulations are a responsibility of the Oregon Department of Fish and Wildlife and will not be addressed in this planning effort.

## **Oregon State Marine Board**

State of Oregon safety and noise regulations, such as requirements for personal flotation devices and their accessibility, no anchor zones, pass-through zones, slow no-wake areas, private watercraft noise standards, and personal watercraft, also have a major impact on the recreational experience. These regulations are a responsibility of the Oregon State Marine Board and will not be addressed in this planning effort.

## **Josephine County**

The comprehensive plan for Josephine County has been acknowledged by the Oregon Department of Land Conservation and Development as conforming with the statewide planning goals and objectives. Virtually all the private lands and all of the BLM-administered and state-managed lands within the planning area are in the following county-designated zones: Exclusive Farm and Farm Resource, Forest Commercial and Woodlot Resource, Rural Residential, Tourist Commercial, Wild and Scenic River, Goal 5 Resources (*i.e.*, Open Spaces, Scenic and Historic Areas, and Natural Resources), and Utilities (see Appendix D).

Josephine County's programs, such as land use and zoning, law enforcement, noise control, and park development, also have a major impact on the recreational experience. These county programs will not be treated in the planning process except as activities that might contribute to cumulative impacts.



## **United States Army Corps of Engineers**

Water releases from reservoirs on the Rogue River is the responsibility of the United States Army Corps of Engineers. These annual water releases will not be addressed in this planning effort.

## **United States Coast Guard**

The U.S. Coast Guard safety regulations for motorized tour boats and their operations, such as inspection of boats, investigation of casualties and accidents, and licensing and certification of boat operators, affect the safety for visitors. These motorized tour boat regulations are the responsibility of the U.S. Coast Guard and will not be addressed in this planning effort.

## **National Marine Fisheries Service**

The Secretary of Commerce, acting through the National Marine Fisheries Service, has the authority to add to and delete from endangered and threatened marine and anadromous species lists based on whether a species faces extinction due to a variety of natural or human-caused factors. The Secretary must also establish recovery plans that set forth conservation goals and specify actions necessary to achieve them for each listed species. Listings will not be addressed as part of this planning effort, except to ensure that BLM-managed activities do not jeopardize the continued existence of listed species or adversely modify habitat critical to those species.

## **United States Fish and Wildlife Service**

The Secretary of the Interior, acting through the United States Fish and Wildlife Service, has the authority to add to and delete from endangered and threatened terrestrial species lists based on whether a species faces extinction due to a variety of natural or human-caused factors. The Secretary must also establish recovery plans that set forth conservation goals and specify actions necessary to achieve them for each listed species. Listings will not be addressed as part of this planning effort, except to ensure that BLM-managed activities do not jeopardize the continued existence of listed species or adversely modify habitat critical to those species.

## **Endangered Species Act**

Management of the Hellgate Recreation Area will comply with any special status species listings and subsequent recovery plans regardless of when they are adopted.

## **Coastal Zone Management Plan**

The Hellgate Recreation Area is outside the defined coastal zone management area, and a formal coastal zone management plan consistency determination is not required. The proposed action will not have any direct affects on the resources within the management zone. The proposed Hellgate RAMP is consistent with the coastal zone management plan. Recognizing that the planning area is outside of the zone, the river clearly involves fisheries which are a coastal resource due to the anadromous nature of the fisheries resource.

## **Cultural**

The Medford District Office will continue to consult with the State Historic Preservation Office, the Advisory Council on Historic Preservation, tribal governments, and other local and federal



agencies as appropriate, regarding the location, evaluation, mitigation, and interpretation of cultural sites within the planning area.

## Decisions to be Made

The BLM will ensure the protection and enhancement of the outstandingly remarkable values of the Rogue River pursuant to the Wild and Scenic Rivers Act through implementation of elements of the Preferred Alternative as proposed, implemented as modified, or not implemented. Management decisions will be made based on the interdisciplinary analysis contained in this Hellgate RAMP/DEIS.

The Record of Decision and Approved RAMP/EIS will supplement certain sections of the BLM Medford District RMP where the resource management plan deferred site-specific or specific river-related decisions to the RAMP.

The decisions to be considered for the Hellgate RAMP are those that supplement land use allocations or management direction contained in the BLM Medford RMP, detail activity planning decisions that implement the RMP, or are administrative and are used to implement RMP or activity plan decisions.

The RAMP identifies the management actions to be implemented to achieve recreation-related management guidelines and standards identified in the BLM Medford District RMP. The RAMP does the following:

- Sets forth the direction for administration, development, and protection of recreational use and resources;
- Identifies specific management actions to be taken; and
- Establishes the general sequence of implementing these management actions.

Public input provided a substantial amount of information about the recreational visitor (approximately 3,000 written responses were analyzed). User carrying capacity, or the amount of use, represented 93 percent of the issues identified. Carrying capacity for the various types of recreation uses in the planning area are problematic to precisely calculate. When possible and where information exists to determine them, they will be addressed. Carrying capacities can be influenced by current and future developments. Within the scope of this EIS, the term "carrying capacity" will be frequently used. Subsequent management of the planning area will support the determination, update and recalculation of different carrying capacities based on current and future management situations relative to each. These next five issues of concern represent another five percent of the issues identified: angling and/or fisheries, socioeconomic benefits, erosion, safety, and noise.

These issues reflect several areas of concern: possible impacts to river resources from visitor use, health and safety, socioeconomic benefits, motorized versus nonmotorized boating, and the social carrying capacity of the river. Social carrying capacity relates to the question of whether the increased visitor use alters or degrades the recreational experience. The motorized tour boat service was clearly identified as the major point of controversy among users of the Hellgate Recreation Area. The common interests of all visitors were the opportunity to view scenery and wildlife, to be in a natural setting, and to enjoy the river. The RAMP will make various decisions about these issues and the allocation of the resource and resource use in the planning area.



# Specific Management Decisions to be Made

Many issues and concerns were identified during several scoping processes (see Chapter 2, Planning Issues) and subsequently analyzed by the BLM. The following lists the issues for which specific management decisions will be made as part of the RAMP. These decisions are grouped here to facilitate discussion and incorporation in the plan. These groupings are used throughout the RAMP.

## All Watercraft Use (Motorized and Nonmotorized)

Decisions will be made whether or not to establish:

- Sound management areas.
- Erosion sensitive areas.
- Angling enhancement zones.
- Fall chinook spawning/sensitive areas.
- Safety sites of concern.

## All Motorized Boating

Decisions will be made whether or not to establish:

- Seasons of use.
- River reaches.
- Thrill power maneuver areas.
- Boat speed limit areas.
- Two-way radio communication requirements.

## Private Motorized Boating

Decisions will be made whether or not to establish:

- Allocations.
- River reaches.

## Commercial Motorized Angling

Decisions will be made whether or not to establish:

- Allocations.
- Maximum number of permits.
- Maximum number of passengers.

## Commercial Motorized Tour Boating

Decisions will be made whether or not to establish:

- Allocations for the number of boat trips for the Applegate Reach.
- Allocations for the number of boat trips for the Dunn Reach.
- Allocations for the number of boat groups/runs.
- A maximum boat size.
- A maximum number of permits.
- Notice display requirements.
- Off-plane procedure requirements.
- Annual daily schedule.
- Daily use or time allowed in the planning area.



## **Special Motorized Boating Events**

Decisions will be made whether or not to establish:

- Allocations for the time allowed per event.
- River reaches.
- Requirements for new events.

## **Nonmotorized Float Boating**

Decisions will be made whether or not to establish:

- Allocations.

## **Nonmotorized Boat Angling**

Decisions will be made whether or not to establish:

- Allocations.

## **Boater Fees and Permits and User Fees**

Decisions will be made whether or not to establish:

- Boater fees and permits by commercially-guided watercraft.
- Requirements for boater permits and fees by watercraft for private use.
- Requirements for user fees.

## **Camping**

Decisions will be made whether or not to establish:

- Primitive camping areas.
- Developed camping areas.
- Human waste packout.
- Campfire requirements, such as the use of fire pans.
- Camping day limits.
- Maximum group size limits.

## **Trails**

Decisions will be made whether or not to establish:

- New trails to be developed.
- Existing trails to be improved and/or expanded.
- Off-highway vehicle trails to be managed.

## **Day-Use Areas**

Decisions will be made whether or not to establish:

- Primitive day-use areas.
- Developed day-use areas.
- Back Country Byways.
- Watchable wildlife sites.



- Limited off-highway vehicle use areas.
- Prohibition-of-firearm discharge areas.

## **Public Access**

Decisions will be made whether or not to:

- Maintain existing boat ramps.
- Improve boat ramps.
- Develop new boat ramps.
- Develop new fishing access sites.
- Regulate vehicle access by requiring day-use parking passes on BLM-administered lands.

## **Visitor Services**

Decisions will be made whether or not to:

- Develop a new administrative and/or visitor center.
- Determine the location of same.

# **Monitoring and Evaluation**

Various activities would be monitored to provide data for use in evaluating the effect of management activities upon the environment in the corridor. Evaluations would measure compliance in achieving the goals and objectives of the Medford Resource Management Plan, the protection and enhancement of the outstandingly remarkable values of the river corridor, and the ability to achieve and maintain the goals, standards, and desired future conditions.

Monitoring and evaluation have distinctly different purposes and scopes. In general, monitoring is designed to gather the data necessary for evaluation. During evaluation, data provided through monitoring are analyzed and interpreted.

The RMP Monitoring and Evaluation Plan provides a process by which management accomplishments, trends, and needs for the river corridor are reported and evaluated. Because of the unique nature of the Wild and Scenic Rogue River and the more refined management direction that would be established as part of a selected alternative, there is a need to conduct more specific monitoring and evaluation within the corridor.

Implementation of the specific monitoring items is dependent upon funding levels. The BLM would actively pursue cooperative agreements for monitoring with river users and organizations.

## **Cultural**

Cultural sites along the Rogue River corridor need consistent monitoring to guard against vandalism and natural destruction. A monitoring plan would be developed.

## **Fisheries**

Annual verification of fall chinook redds would be conducted from September 15 to September 30. Efforts to identify spawning behavior during this time period may signify possible restraints on MTB use.



## Wildlife

The Hellgate Recreation Section contains a variety of wildlife resources. To ensure the maintenance of these resources, the following recommendations are included for monitoring:

Before any habitat alteration or ground-disturbing activities occur, conduct surveys for the appropriate plant and wildlife species. If threatened, endangered or special status species occur, implement the proper mitigation.

Prepare site-specific management plans for each known bald eagle nest site. These plans should include monitoring nesting activity on an annual basis. If an unwanted change in the eagle population is correlated with a change in human activity, develop specific mitigation measures.

Monitor osprey nests and great blue heron rookeries at intervals adequate to determine trends.

Where cottonwood stands occur, do not promote recreation or further development of these sites.

Where suitable bald eagle foraging habitat occurs (slack water and large gravel bars with perch trees), do not promote recreation or further development of these sites.

## Analysis Files

All documents and files chronicling the planning process for this RAMP/DEIS are available for review at the BLM Medford District Office. These documents and files contain the detailed information and decisions used in developing the RAMP/DEIS and are referenced at appropriate places in the text.



The first step in the process of wildlife management is to identify the species that are present in the area. This is done by conducting a survey of the area, which may involve setting traps, using cameras, or other methods. Once the species have been identified, the next step is to determine their status. This is done by comparing the number of individuals to a known baseline, or by using other methods such as mark-recapture studies. Once the status has been determined, the next step is to develop a management plan. This plan should take into account the needs of the species, the needs of the landowners, and the needs of the public. The plan should also include a monitoring and evaluation component, which will allow the manager to track the success of the plan and make adjustments as needed.

## Analysis Files

## Monitoring and Evaluation

Monitoring and evaluation are essential components of any wildlife management plan. Monitoring involves tracking the status of the species over time, while evaluation involves assessing the effectiveness of the management plan. Both monitoring and evaluation are necessary to ensure that the plan is working as intended and to make adjustments as needed. There are several methods for monitoring and evaluation, including mark-recapture studies, camera traps, and other methods. The choice of method will depend on the species and the resources available. Monitoring and evaluation should be ongoing, rather than a one-time exercise, to ensure that the plan remains effective over time.

## Cultural

Cultural resources are an important part of the natural heritage of many areas. These resources include historic buildings, archaeological sites, and other cultural landmarks. It is important to protect these resources and to ensure that they are preserved for future generations. This can be done through a variety of methods, including historic preservation, archaeological excavation, and other methods.

## Fisheries

Fisheries are an important part of the natural resource base of many areas. They provide food, recreation, and other benefits. It is important to manage fisheries sustainably, so that they can continue to provide these benefits for future generations. This can be done through a variety of methods, including fishery management plans, habitat restoration, and other methods.



# Chapter 1

## Table, Map and Figure

Table 1-1. Land Ownership within the Helix Recreation Area

Ownership		
Private (with some exceptions)	1,431	38
Private (with some exceptions)	154	4
Total Private	1,585	42
Eschscholtz County	1,001	26
State of Oregon	584	15
Public Land Management		
Acquired Public Domain	1,001	26
U.S. Forest Service	584	15
Total BLM	1,585	41
TOTAL	3,170	83



# Chapter 1

## Table, Map and Figure

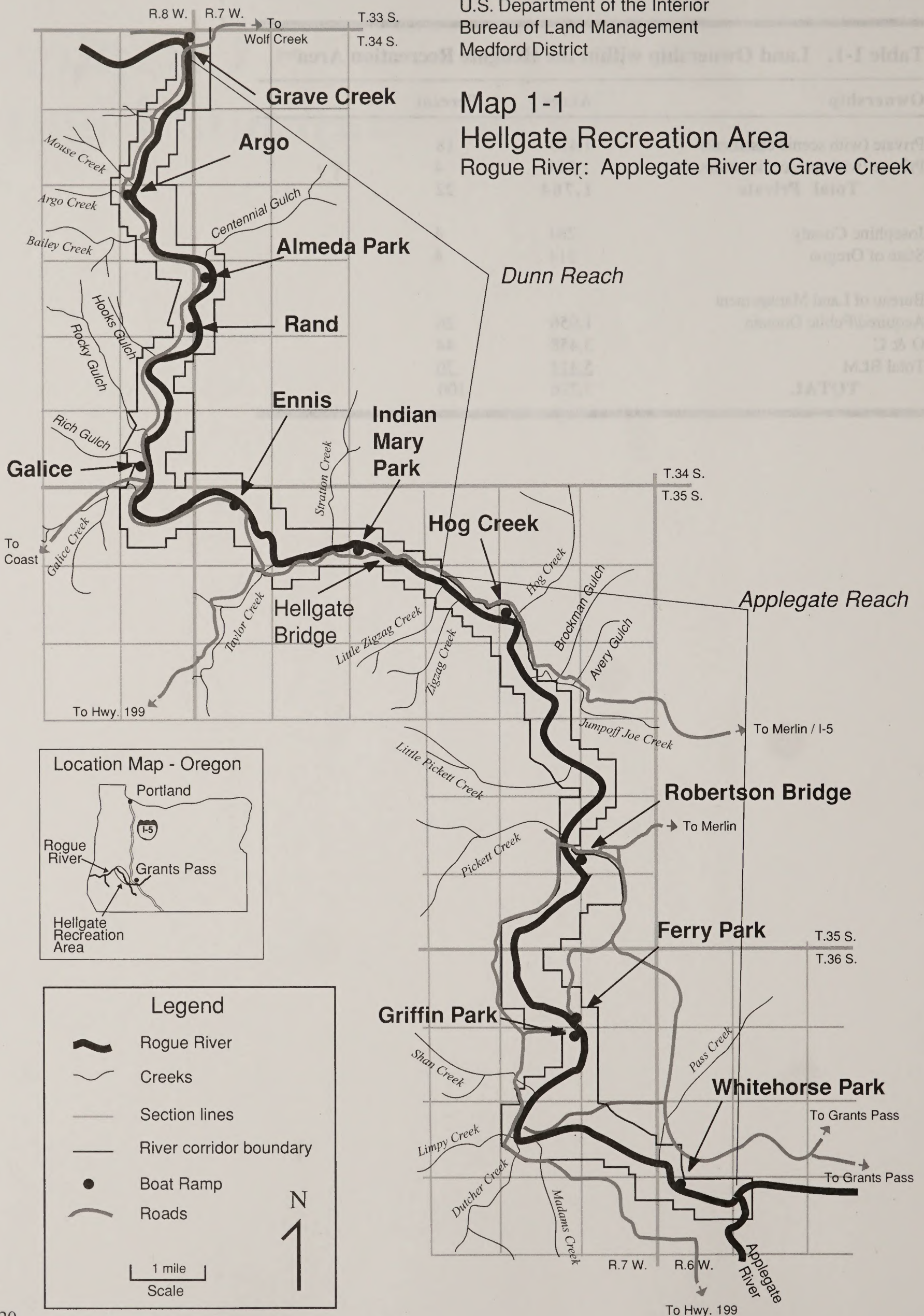


**Table 1-1. Land Ownership within the Hellgate Recreation Area**

Ownership	Acres	Percent
Private (with scenic easement)	1,410	18
Private (without scenic easement)	354	4
<b>Total Private</b>	<b>1,764</b>	<b>22</b>
Josephine County	284	4
State of Oregon	314	4
Bureau of Land Management		
Acquired/Public Domain	1,956	26
O & C	3,458	44
Total BLM	<u>5,414</u>	<u>70</u>
<b>TOTAL</b>	<b>7,776</b>	<b>100</b>



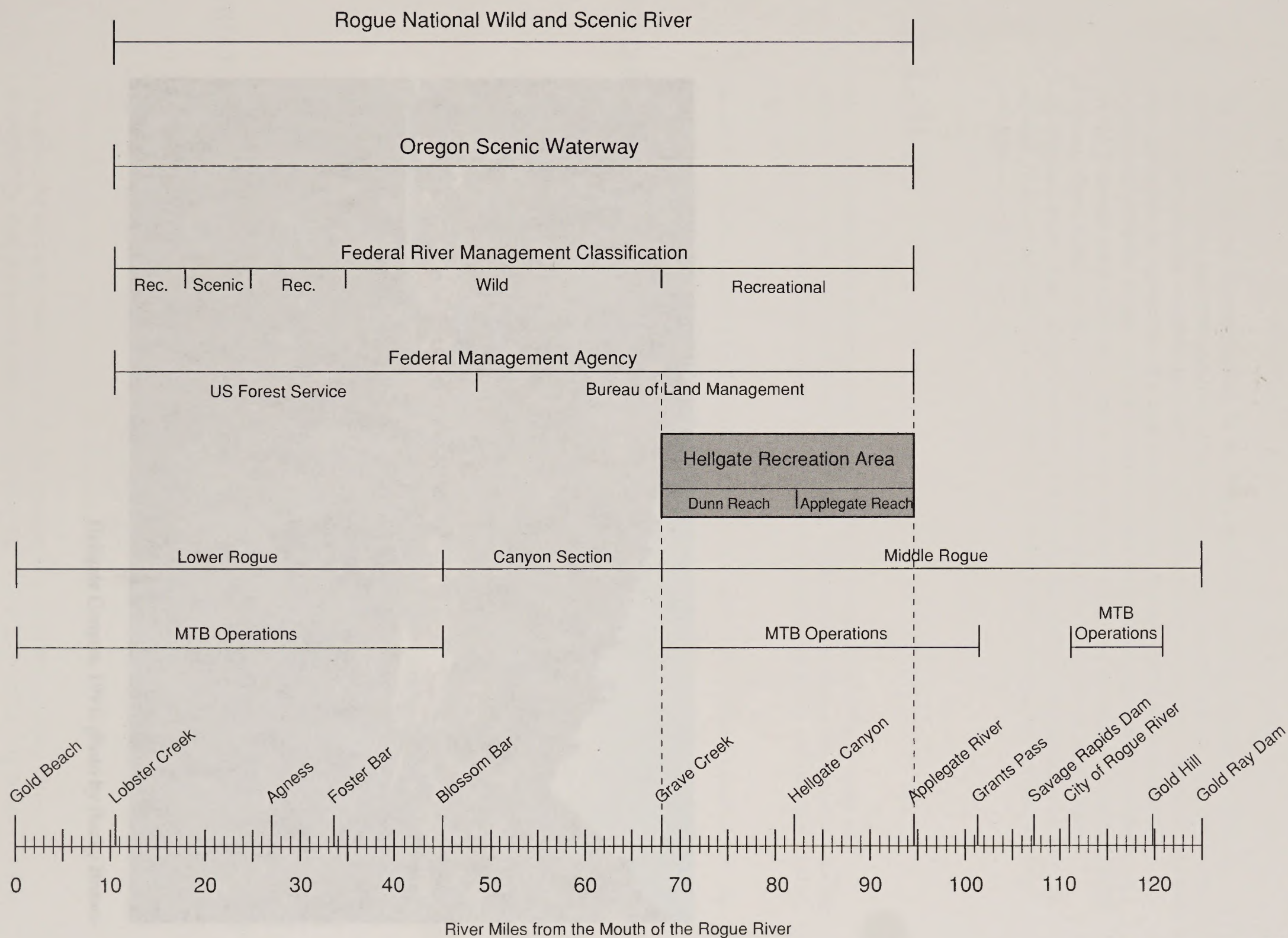
**Map 1-1**  
**Hellgate Recreation Area**  
Rogue River: Applegate River to Grave Creek





U.S. Department of the Interior  
Bureau of Land Management  
**Medford District**

Figure 1-1 Management Jurisdiction and Motorized Tour Boat (MTB) Operations  
from the Mouth of the Rogue River to Gold Ray Dam





U.S. Department of the Interior  
Bureau of Land Management  
Alaska Division

Map 1-1  
Hatchers Recreation Area  
Hatchers River, approximately 10 miles to Grave Creek



General map to Hatchers Area  
Hatchers River, approximately 10 miles to Grave Creek  
Hatchers River, approximately 10 miles to Grave Creek  
Hatchers River, approximately 10 miles to Grave Creek



# Chapter 2

## Alternatives



Hellgate Canyon, 1993- photo by Becky Brown



## Chapter 2 Alternatives



Figure 2.1: A close-up photograph of a textured surface, possibly a forest floor or a rock surface.



This chapter describes the range of alternatives including the No Action Alternative (Current Management) and the BLM's Preferred Alternative (Alternative E), which is the Medford District's Proposed Action. The range of alternatives lists different ways the issues could be resolved; the alternatives present different approaches to meeting the underlying needs identified in Chapter 1. The management objectives and standards are applicable to all alternatives (see Appendix C).

The 27-mile Hellgate Recreation Area of the National Wild and Scenic Rogue River (from its confluence with the Applegate River to Grave Creek) provides a broad range of land- and water-based recreational opportunities (see Map 1-1). Recreational use of this river segment is managed with a minimum of regulations. Campgrounds, day-use recreation sites, and boat launching facilities are available. Commercial activities regulated by permit are motorized tour boats, guided float trips and fishing trips. Private recreational activities are presently unregulated by the Bureau of Land Management (BLM). The river's proximity to Medford and Grants Pass, abundant nearby recreation support services (raft rentals and supplies, commercial guide services, shuttles, motels, and restaurants), and a growing public interest in river recreation have led to a tremendous increase in visitor use.

## Planning Issues

All of the recommended planning issues share one topic: the growth of different types of recreation use on the river (see Figures 2-1 and 2-2). How much recreation use can and should the river support? In addition, how many visitors to the river by watercraft can and should the river support?

Issues that have been identified are described below. The order of the planning issues reflects the level of public and agency interest.

### Motorized Boating

How should motorized boating (commercial, private, and competitive) be managed (e.g., how many, what type, permitted season, river reach, mix between commercial and private)? Motorized boats are defined as boats with a motor, regardless of the horsepower rating.

The increase in the number of visitors using motorboats, especially motorized tour boats (MTBs) has prompted concerns over conflicts among motorized boating and nonmotorized float boating, boat angling, and landowners (see Figure 2-3). Motorized boating contributes to competition for fishing areas. Many anglers and other users resent the noise, wake, and potential safety problems of motorized boating. The issue also includes a concern over streambank erosion/deposition as it affects the condition of riparian areas, loss of private land and possible impacts to sensitive fish species. The visitor use conflicts are most evident during the hot summer weekends and the fall fishing season.

### Nonmotorized Float Boating

How should nonmotorized float boating be managed (e.g., how much, what kind, permitted season, mix between commercial and private)? Does visitor use by nonmotorized float boating affect sensitive fish species? Nonmotorized float boating means watercraft without a motor (inflatable rafts, hard shell and inflatable kayaks and canoes).

The growth of nonmotorized float boating has prompted concerns over conflicts among nonmotorized float boaters and motorized boaters, anglers, and landowners. The social problems



are most evident during the hot summer weekends (see Figure 2-3). The number of commercial permittees is not limited in the Hellgate Recreation Area under current management. Visitors to the river by watercraft have the choice to either have a private trip or employ the services of a commercial outfitter.

## **Nonmotorized Boat Angling**

How should a quality nonmotorized boat angling experience be maintained or enhanced (e.g., how much, what kind, permitted season, mix between commercial and private watercraft use)?

Nonmotorized boat angling means fishing from a watercraft without a motor (inflatable rafts, hard shell and inflatable kayaks, and canoes).

The nonmotorized boat angling experience issue has four main components: competition for fishing areas, angler versus boating conflicts (i.e., boating across fishing water), biological health of fisheries resources, and noise and safety conflicts between nonmotorized angling watercraft users and motorboat users (see Figure 2-3). The jet boat or motorized tour boat service was clearly identified by anglers as a major point of controversy.

## **User Fees**

Should user fees be levied on all visitors using watercraft within the Hellgate Recreation Area of the Rogue River? How can fees that are collected be reinvested in on-the-ground management? Should private users pay their share of the cost of management services and facilities provided?

An adequate and stable funding mechanism are essential for resource protection, visitor services, facility development, operation, maintenance and trash collection and access acquisition. There is increasing pressure for BLM to obtain a "fair" return for recreation investments and services provided on the public lands. This may in part translate to establishing and/or increasing recreation and user fees to offset the cost of providing recreational services. Visitors using guides pay for their share of the cost of managing the river resources through the commercial fees that permitted outfitters pay.

## **Recreational Opportunities**

What types of recreational opportunities should be provided?

### **How and Where Should Camping be Managed?**

How should BLM contribute to the developed and undeveloped camping opportunities while protecting river resources? What level and type of developments are appropriate?

There is some degree of competition for campsites in the Hellgate Recreation Area which is expected to increase. This competition is especially intense during the peak use periods when demand exceeds supply. There is the potential for camping activities to impact the physical and biological environments.

Presently the BLM-administered land from the Applegate River to Hellgate Park is a day-use only area. Overnight camping is allowed from Hellgate Park to Alameda Park on the right side of the river and from Alameda Park to Grave Creek on both sides of the river, except for private land or land posted as day-use only. Camping is limited to 14 days.



## **How and Where Should a Trail System be Managed?**

How should BLM contribute to the developed and undeveloped trails while protecting river resources? What level and type of developments are appropriate?

The limited number and primitive quality of trails within the Hellgate Recreation Area restricts access for recreationists. A trail system to accommodate a broad range of visitors (e.g., hikers, equestrians, anglers, bicyclists and off-highway vehicle users) could be developed to improve access opportunities to the Hellgate Recreation Area and adjacent public lands.

Many of the existing trails were primarily developed over the years by visitors seeking river access. Some of these trails would require reconstruction along old roads, abandoned trails, and mining ditches. Where no trails currently exist, the trail system could consist of multiple-use (i.e., hiking, equestrian, mountain bike, and off-highway vehicles) or restricted use (hiking only) trails. Some trails could be designated day-use only, while others could allow both day and overnight use.

## **What Type of Day-Use Areas Should be Provided?**

What type of day-use recreational opportunities should be provided? Should there be more "watchable wildlife" sites?

Day-use activities that occur in the planning area are: fishing, gold panning and dredging, wildlife observation, rock hounding, picnicking, sightseeing, photography, sunbathing, boating, swimming and hunting.

## **What Action Should be Taken to Manage Public Access?**

Are additional or improved boat ramps and fishing access sites needed? Should vehicular access be regulated?

There are many launch and landing sites with crowding problems and visitors exhibiting rude behavior during periods of high use.

## **What Action Should be Taken to Provide Visitor Services**

Should there be administrative and/or visitor center sites?

A visitor center (VC) accommodates a broad range of visitors. These visitors engage in a variety of recreational activities, such as hiking, wildlife viewing, driving for pleasure, fishing, picnicking, camping, boating and swimming. A visitor center provides educational and tourist information for people interested in the resources available in the Hellgate Recreation Area. River program staff provide: wild section private permit administration, commercial permit administration, river-use education (e.g., the area's cultural, Native and geological history, how to use the river safely, river etiquette), day-use and camping opportunities, and equipment inspection.

# **Alternative Development Process**

In considering solutions to the various identified issues in the planning area, a wide range of possibilities exists. Some solutions to the issues could create a more developed environment with higher use, while other solutions could result in a lower level of development with less public use.



The BLM interdisciplinary team (ID team) of resource specialists used opinions, comments and suggestions gathered at internal and public scoping meetings to help define key issues identified in the purpose and need for the action. Alternatives were developed by the ID team to respond to the issues generated by analyzing the need for the action. Alternatives were also submitted by special interest groups for consideration in the alternative development process. The alternatives carried forward for detailed study are designed to address the significant issues surrounding the need for the action.

Each alternative varies management prescriptions that alter the commodity production or demand (i.e., watercraft use) and amenity outputs from BLM-administered lands. Prescriptions for visitor services, recreational facilities and the availability of recreational opportunities are also addressed for each alternative.

## **Alternatives Analyzed in Detail**

A description of the range of alternatives is identified in the following sections, including BLM's Preferred Alternative (Proposed Action). The alternatives are designed to achieve the purpose and need for action, management goals and standards, desired future conditions, the protection and enhancement of the outstandingly remarkable values (ORVs) and the recreation opportunity experience characterization for the river corridor (see Appendix E).

For many years the Hellgate Recreation Area has provided a wide range of recreational opportunities in a generally natural but roaded environment. Five alternatives have been developed that continue this general philosophy of management and address the identified issues.

### **Alternative A: Fewer Watercraft and Less Visitor Use**

The objectives of Alternative A are to improve natural resource conditions, significantly reduce watercraft use levels, and provide recreational opportunities in a less crowded setting while protecting the environment and the outstandingly remarkable values. The sights, sounds, and overall level of interaction between individuals or groups would be low to moderate. The watercraft use levels would be managed at the level that existed before the general controversy over river management began (i.e., maximum of 12 round-trips per day for motorized tour boats). No new facilities would be developed. Management and control of visitor use would be on-site and off-site through fees, regulations, and limitations. Fees and permits would be required for commercial and private watercraft users and the number of commercial outfitters would be limited. On-site management and controls would fit into the natural landscape to the greatest degree possible. This alternative reflects a time with less visitor use than exists today.

### **Alternative B: No Action or Current Management/ Watercraft and Visitor Use as it is Now**

The objectives of Alternative B are to continue present levels of management while protecting the environment and the outstandingly remarkable values. Alternative B is the No Action Alternative required by the National Environmental Policy Act and is the baseline to which the other alternatives are compared. Fees and permits would only be required for commercial watercraft users, but the number of commercial outfitters would not be limited. Except for motorized tour boats (i.e., maximum of 19 round-trips per day) and commercial motorized angling boats, overall recreation use levels would be unregulated. The sights, sounds and interaction between individuals and groups would be moderate to high. For analysis purposes, the number of watercraft trips is assumed to remain constant through 2006. On-site management and controls would be evident in some areas and lacking in others.



## **Alternative C: Angler and Floater Enhancement/ More Watercraft and Visitor Use**

The objectives of Alternative C are to enhance the angling and floating experience while protecting the environment and outstandingly remarkable values. The alternative would be designed to minimize potential impacts to the fisheries resource and increase fishing opportunities while enhancing the fishing experience. This alternative would also maximize floating opportunities and protect the floating experience from the adverse impacts of other users (e.g., commercial motorized watercraft use is not authorized in the Dunn Reach during weekends and holidays in both July and August). Facilities to serve the angling and floating publics would be developed. Permits would be required for all watercraft users. Fees would only be required for commercial watercraft users. The number of commercial outfitters for floating and boat angling would not be limited. Except for commercial motorized tour boats (i.e., maximum of 12 round-trips per day) and commercial motorized angling boats, overall recreation use levels would be unregulated and would continue to increase unless carrying capacity is reached. Limits, permits and fees would be required for all watercraft users if their carrying capacities are reached. The sights, sounds and interaction between individuals and groups would be moderate to high.

## **Alternative D: Maximum Watercraft and Visitor Use**

The objectives of Alternative D are to maximize the level of recreational use while protecting the environment and the outstandingly remarkable values. The sights, sounds and interactions with other individuals or groups would often be high. Facilities to enhance recreational opportunities, such as camping, boating, angling and vehicle-oriented activities, would be developed. On-site management and controls would be obvious but limited to those necessary for public health and safety as well as to accommodate increased numbers of visitors. Fees and permits would be required for all watercraft users. The number of commercial outfitters for floating and boat angling would not be limited. Commercial motorized tour boats (i.e., maximum of 26 round-trips per day) and commercial motorized angling boats would be regulated, but at a higher level of use than the other alternatives. Overall recreation use levels would continue to increase causing a high degree of interaction between individuals and groups.

## **Alternative E: The Preferred Alternative**

The objectives of Alternative E (the Preferred Alternative/Proposed Action) are to increase the level of recreational use while protecting the environment and the outstandingly remarkable values. The sights, sounds and interactions with other individuals or groups would often be high. The Preferred Alternative would be designed to minimize potential impacts to the fisheries resource and increase fishing opportunities while enhancing the fishing experience (e.g., this alternative establishes a season of use for motorized traffic from May 1 through September 15). This alternative would also maximize floating opportunities and protect the floating experience from the adverse impacts of other users (e.g., commercial motorized watercraft use is not authorized in the Dunn Reach during weekends and holidays in both July and August). Permits and fees would only be required for commercial watercraft users. The number of commercial outfitters for floating and boat angling would not be limited. Except for commercial motorized tour boats (i.e., maximum of 19 round-trips per day), commercial motorized angling boats and special motorized boating events overall recreational use levels would be unregulated and continue to increase unless carrying capacity is reached. Limits, permits and fees would be required for all watercraft users if their carrying capacities are reached.



# Alternative A: Fewer Watercraft and Less Visitor Use

Alternative A represents an experience with fewer watercraft and less visitor use than today. The number of watercraft is the major variable being limited; the number of visitors is not being limited. See Tables 2-1 through 2-14 for a summary of the management requirements.

The specific management actions for Alternative A are as follows:

## All Watercraft Use

The following are specific management actions that would be applicable to all types of visitor use by watercraft, both motorized and nonmotorized (see Table 2-1).

### Sound Management Areas

There are no specific areas designated as sound management areas. The objectives of the sound management area are to minimize sound for all watercraft users and to minimize sound intrusions for residents/landowners and other users. For additional information see the Preferred Alternative, Sound Management Areas.

The Oregon State Marine Board regulates sound produced by private recreational motorboats. The objectives of a sound management area are in addition to and separate from the sound standards (i.e., decibel levels) for recreational watercraft administered by the Oregon State Marine Board. Managing the loudness of sound by limiting the use of decibel levels beyond the State of Oregon standards is not being considered.

Unreasonable noise is prohibited on BLM-administered land and water. (See 43 CFR 8365.1-4 (a) (1).) For example, the sound from new water pumping facilities must not be readily noticeable to the river visitor.

### Angling Enhancement Areas

There are no specific areas designated as angling enhancement areas. For additional information see the Preferred Alternative, Angling Enhancement Areas and the Glossary.

### Fall Chinook Spawning/Sensitive Areas

There are no specific areas designated as fall chinook spawning/sensitive areas. For additional information see the Preferred Alternative, Fall Chinook Spawning/Sensitive Areas.

### Safety Sites of Concern

There are no specific areas designated as safety sites of concern. For additional information see the Preferred Alternative, Safety Sites of Concern.

The Oregon State Marine Board manages three no anchor zones and one pass through zone in the Hellgate Recreation Area for boating safety.



# **All Motorized Boating**

The following are specific management actions that would be applicable to all types of visitor use by motorized watercraft (see Table 2-2).

## **Season of Use**

A season of use is that part of the year when an activity that requires a permit is prescribed to occur. The season of use is year-round for all motorized boating in the Applegate and Dunn reaches, except for MTBs during May 1 through September 30. See later sections, Commercial Motorized Angling and Motorized Tour Boating.

## **Erosion Sensitive Areas**

There are no specific areas designated as erosion sensitive areas. For additional information see the Preferred Alternative, Erosion Sensitive Areas, and Table 2-2 and Map 2-1.

## **River Reach**

Motorized boating is allowed in both the Applegate and Dunn reaches.

## **Thrill Power Maneuver Areas**

There are no specific areas designated as thrill power maneuver areas. For additional information see Preferred Alternative, Thrill Power Maneuver Areas.

## **Boat Speed**

Boat speed is unregulated, except for areas at boat ramps and county-designated swim areas. The BLM acknowledges the Oregon State Marine Board's objectives of no wake zones at boat ramps and county-designated swim areas. The objectives are to enhance safety and the recreational experience of visitors in high-density user areas.

## **Two-Way Radio Communications**

Boating safety is enhanced if the operators of motorized boats have the ability to communicate with each other, especially where topography or vegetation reduces line-of-sight restrictions. Management actions would include an educational outreach that encourages the use of two-way radios by visitors using motorized watercraft and require motorized tour boats to be equipped with two-way radios.

# **Private Motorized Boating**

## **Allocation/Limits**

A carrying capacity has been identified and there is an allocation of, or limit to, the number of motorized boats that private or noncommercial visitors use during the hot summer months of July and August. The limit is equal to the approximate maximum daily private motorized boat trips that occurred in 1985 (see Table 2-3).

The maximum daily allocation limit was estimated to be five trips per day during July and August. There are no limits for private motorized boating for the rest of their season of use. The permits will be authorized daily on a first come, first served basis.



## **Season of Use/River Reach**

Private motorized boating would be year-round in the Applegate and Dunn reaches.

## **Commercial Motorized Boat Angling**

### **Season of Use**

The season of use for visitors is May 1 through September 30 (see Table 2-4). This season approximates historical use in 1985 (Walker and Austermuehle 1994).

### **Allocation/Limits**

An allocation has been set that limits commercial motorized boat angling to two trips per day per permit during the designated season of use. The limit is the approximate maximum daily commercial motorized angling boat trips that occurred in 1985.

The objectives are to provide a motorized angling opportunity for those unable to otherwise provide themselves this experience and to protect river resources and the recreational experiences of other users.

### **Number of Permits**

One permit would be issued to one operator.

### **Boat Size**

Commercial motorized tour boats would be permitted to carry up to six anglers.

## **Commercial Motorized Tour Boating**

### **Season of Use**

The season of use for visitors is May 1 through September 30 (see Table 2-5). This season approximates historical use in 1985 (Walker and Austermuehle 1994).

### **Allocation/Limits in the Applegate Reach**

Commercial motorized tour boating would have an allocation or limit equaling a maximum of 12 round trips per day in the Applegate Reach. The 12-trip allocation enhances the motorized tour boaters' recreational experience during the heaviest use days of summer. The objectives are to provide a wide range of recreational opportunities, both motorized and nonmotorized, while minimizing impacts to other users.

Motorized boating would continue. Research into background documents, personal interviews and historical advertising media have shown MTB use to have been an integral part of the available recreation opportunities since 1954. This recreation activity has been occurring from Grants Pass to Grave Creek and from Gold Beach to Blossom Bar since the above referenced date. Twelve round trips per day is the approximate MTB use level in 1985 (Walker and Austermuehle 1994). The allocations in the Applegate Reach represent an acknowledgment that the primary watercraft traffic is the motorized tour boat (MTB).



## **Allocation/Limits in the Dunn Reach**

Commercial motorized tour boating would be allocated a maximum of eight round trips per day in the Dunn Reach, except on the July 4th holiday and the weekend days in July and August when it would be four trips per day. The eight-trip allocation could occur any time during the daily times motorized tour boats were allowed in the planning area.

The four-trip allocation enhances the recreational experience of the nonmotorized float boater (i.e., rafter, inflatable kayaker) during the heaviest use days of summer. The four-trip per day allocation could occur any time during the daily times MTBs are allowed in the planning area. The allocation in the Dunn Reach is an acknowledgment that the primary watercraft traffic is the nonmotorized float boater.

## **Safety Sites of Concern**

Safety sites of concern are not designated.

## **Groups/Runs**

Groups/runs of motorized tour boats are at the operator's discretion.

## **Boat Size**

Maximum boat sizes for motorized tour boats (MTBs) are set such that one MTB must be less than 43 feet long and 14 feet wide and all other MTBs must be less than 36 feet long and 12 feet-6 inches wide. These boat dimensions represent the characteristics of the MTB fleet in 1985 (Walker and Austermuehle 1994).

## **Number of Permits**

Four permits would be issued. The limit for the number of permits represents the actual number of MTB operations that occurred in 1985. Two permits would be issued based on the present use (i.e., historical use) and two permits would be issued based on the bid and prospectus method of rationing (see Glossary).

The four historical motorized tour boat operations' cumulative maximum daily total is 12 round trips.

## **Notice Displays**

The use of notice displays on MTBs is at the discretion of the boat operator. The notice display objective is to inform other users of the number and the order of MTBs in a run.

## **Off Plane Procedures**

The use of off plane procedures is at the discretion of the boat operator. The purposes of the off plane procedure are to ensure safe maneuvering in narrow constricted areas that could be crowded with other watercraft users, to be sensitive to high visitor use areas, and to protect river resources.

## **Annual Daily Schedule**

Implementing an annual daily schedule is at the operator's discretion.



The purpose of an annual daily schedule is to inform other users of the approximate times MTBs would be passing certain locations on the river. This knowledge enables the other river users to minimize conflicts with motorized boaters. The MTB permittee(s) would make copies of the annual schedule available to other users and businesses. Schedules should also be available and on display at the primary place(s) of business for the MTB operation.

## **Daily Use**

Daily use patterns are at the operator's discretion.

## **Special Motorized Boating Events**

Most common management actions applicable to other types of motorized boating traffic are not applicable to special motorized boating events except for the season of use common to all motorized boating (see Table 2-6).

### **Allocation/Limits**

An allocation has been set that limits the number of special motorized boating events to two. The two special motorized boating events (Memorial Day Boatnik race including the unlimited class jetboat race and Labor Day boat races) would have an allocation that limits the duration of the event to two hours/day. This limit ensures the continuation of a use that encompasses the highest historical usage while establishing a limit to protect river resources and other visitors' recreational experiences.

### **River Reach**

Special motorized boating events would be allowed in the Applegate and Dunn reaches.

### **Number of Permits**

Additional permits would not be issued for special motorized boating events.

### **New Specialized Motor Boat Events**

New specialized motor boating events would not be considered.

## **Nonmotorized Float Boating**

### **Allocation/Limits**

The limit is the approximate maximum daily nonmotorized float boat trips that occurred in 1985 (i.e., one watercraft day equals one float boat trip). This limit was identified as 120 boat trips per day in the Dunn Reach during its season of use. There is no limit or allocation for the Applegate Reach. The season of use for nonmotorized float boating is year-round. Nonmotorized float boating is allowed in both the Applegate and Dunn reaches (see Table 2-7).

A carrying capacity has been identified and there is an allocation or limit to the number of nonmotorized float boaters (i.e., both commercial and private use) in the Dunn Reach, which receives approximately 90 percent of the floating use in the Hellgate Recreation Area (see Chapter 4, Effects on Nonmotorized Float Boaters) (MRSCTU 1994).



# **Nonmotorized Boat Angling**

## **Allocation/Limits**

The maximum daily trips would be allocated using the even-split method (see Glossary) which is where an equal split is used for various user groups (see Table 2-8). In this case, nonmotorized angling boats used by visitors are split 50-50 between guided and nonguided parties (i.e., commercial and private).

A carrying capacity has been identified and there is an allocation or limit to the number of nonmotorized angling boats that visitors use (both commercial and private). The limit is the approximate maximum daily nonmotorized boat angling that occurred in 1985. This limit was estimated at 30 boat trips per day (MRSCTU 1994).

## **Season of Use/River Reach**

Nonmotorized boat angling is year-round in the Applegate and Dunn reaches.

# **Boater Fees and Permits and User Fees**

An adequate and stable funding mechanism is essential under a limited entry system. Funding would be used for resource protection, visitor services, facility development, operation, maintenance and trash collection, as well as access acquisition. There is increasing pressure for BLM to obtain a fair return for recreation investments and services. This may in part translate to establishing or increasing recreation and user fees to offset the cost of providing recreation services (see Table 2-9).

## **Commercially-Guided Watercraft**

Boater fees and permits would be required.

## **Watercraft for Private Use**

Boater fees would be required.

Boater permits would be required. Visitors using private, nonmotorized float boats are allocated 60 daily trips. Visitors using private nonmotorized angling boats are allocated 27 daily trips.

## **User Fees**

User fees are required. An annual day-use parking pass would be required for all vehicles parked on BLM-administered day-use areas within the corridor of the Hellgate Recreation Area.

# **Recreational Opportunities**

## **Camping**

### **Corridor Areas Open to Camping**

The corridor area open to camping on BLM-administered land, unless otherwise identified, is from Hellgate Park to Grave Creek. The corridor area closed to camping on BLM-administered land is the upstream segment of the Hellgate Recreation Area (i.e., near the confluence of the Applegate River with the Rogue River) to Hellgate Park.



## **Primitive Camping Areas**

Primitive camping areas are those sites without improvements, such as toilets, picnic tables and trash cans. All undeveloped campsites would be closed to discourage improper human waste disposal.

## **Developed Camping Areas**

Developed camping areas would have one or more of the following improvements: parking, toilets, picnic tables, trash cans, fish cleaning stations or informational signs (see Table 2-10).

## **Human Waste Pack Out**

Commercial and private users would be required to pack out human waste at sites without toilets.

## **Campfires**

Campfire use would be subject to all current State of Oregon regulations. Campfires are allowed unless the area is closed by the Oregon Department of Forestry.

## **Day Limits**

The day limits or stay length on BLM-administered land within the Hellgate Recreation Area is generally 14 days per site. Stay lengths may be adjusted to meet resource protection needs or to create more equitable opportunities for camping at popular sites. Any adjustments would be implemented through signing at the site. Camping is prohibited in any area posted as closed to that use. Occupying any portion of a developed or undeveloped recreation site for other than recreational purposes is prohibited, as is occupying a place between 10 p.m. and 6 a.m. that is designated for day-use only.

## **Maximum Group Size**

There would be no maximum or limit to the group size per campsite.

## **Trails**

Trails would be maintained and managed to have minimum effect on other resource values and to provide for the safety of the visitor (see Table 2-11).

Brochures and maps would provide trail access information, trail locations, trail use guidelines and trail descriptions. The trails would be signed at trailheads.

## **Develop New Trails**

New trails would not be developed except for the Hellgate Placer Mine of Wells Trail.

## **Improve and Expand Existing Trails**

Existing trails would not be improved or expanded except the Umpqua Joe Trail.

## **Off-Highway Vehicle Trails**

Off-highway vehicle trails would not be developed.



## **Day-Use Areas**

### **Primitive Day-Use Areas**

Primitive day-use areas are those sites without improvements, such as toilets, picnic tables or trash cans. Interpretative information would be available about the site in media such as brochures (see Table 2-12).

### **Developed Day-Use Areas**

Developed day-use areas would have one or more of the following improvements: parking, toilets, picnic tables, trash cans, fish cleaning stations, or informational signs (see Table 2-12).

### **Back Country Byways**

The existing Galice-Hellgate National Back Country Byway would be maintained.

### **Watchable Wildlife Sites**

Three watchable wildlife sites within the Hellgate Recreation Area would be maintained: Whitehorse, Hog Creek and Hellgate Overlook. One new watchable wildlife site would be developed at Flanagan Slough.

### **Limited Off-Highway Vehicle Use Areas**

Two areas would be allocated as limited off-highway vehicle (OHV) use areas: Griffin Lane Complex and Rocky Bar. The purposes of the limited OHV use areas are site access to facilitate simple passage for anglers to fishing areas and the opportunity for visitors to engage in primitive vehicle camping below Hellgate Canyon.

Lands within the Hellgate Recreation Area are not allocated as open to OHV use. All lands not allocated as limited are closed to OHV use.

### **Prohibition-of-Firearm-Discharge Areas**

Six areas are designated as prohibition of firearm discharge areas during the high summer visitor use period from June 1 through September 15 (see Table 2-12). All permitted hunting activities are allowed.

Discharge of a firearm or any other implement capable of taking human life, causing injury or damaging property is prohibited at any time within 150 yards of a residence, building, developed or undeveloped recreation site, occupied area or at any time across or on any public road or across or on any trail or body of water whereby any person or property is exposed to injury or damages as a result of such discharge.

## **Public Access**

There are presently 12 boat launch and landing sites in the Hellgate Recreation Area. These sites are: Whitehorse, Griffin, Ferry, Robertson Bridge, Hog Creek, Indian Mary, Ennis, Galice, Rand, Alameda, Argo and Grave Creek. These areas provide optimal opportunity for boat access; however, overcrowding and rude behavior are sometimes concerns during periods of high use.

### **Maintain Existing Boat Ramps**

Six boat ramps would be maintained (see Table 2-13).



### **Improved Boat Ramps**

Argo boat access site would be improved.

### **New Boat Ramps**

New boat ramps would not be developed.

### **Maintain Fishing Access Sites**

Fishing access sites would not be maintained; however, all boat access sites are used as fishing access sites.

### **New Fishing Access Sites**

New fishing access sites would not be developed.

### **Vehicle Access Regulated**

Vehicle access and parking would not be regulated, and day-use permits would not be required for vehicle access and parking.

## **Visitor Services**

The Rand VC would continue to be maintained. A new VC would be constructed in Merlin or Grants Pass. Rand staff would provide customer service out of the new VC. The River program staff would continue to provide administrative services out of the District Office. See Table 2-14.

# **Alternative B - Current Management/No Action**

Alternative B is the "No Action" alternative required by the National Environmental Policy Act. It represents current management with numbers of watercraft and visitor use as they are now. This alternative provides a baseline from which to evaluate the other alternatives. (See Tables 2-1 through 2-14 for a summary of the management requirements.)

The specific management actions for Alternative B are as follows:

## **All Watercraft Use**

The following are specific management actions that would be applicable to all types of visitor use by watercraft, both motorized and nonmotorized (see Table 2-1).

## **Sound Management Areas**

There are no specific areas designated as sound management areas. The objectives of the sound management area are to minimize sound for all watercraft users and to minimize sound intrusions for residents/landowners and other users. For additional information see Preferred Alternative, Sound Management Areas.

The Oregon State Marine Board regulates sound produced by private recreational motorboats. The objectives of a sound management area are in addition to and separate from, the sound standards (i.e., decibel levels) for recreational watercraft administered by the Oregon State Marine Board. Managing the loudness of sound by limiting the use of decibel levels beyond State of Oregon Standards is not being considered.



Unreasonable noise is prohibited on BLM-administered land and water. (See 43 CFR 8365.1-4 (a) (1)). For example, the sound from new water pumping facilities must not be readily noticeable to the river visitor.

## **Angling Enhancement Areas**

There are no specific areas designated as angling enhancement areas. For additional information see Preferred Alternative, Angling Enhancement Areas.

## **Fall Chinook Spawning/Sensitive Areas**

There are no specific areas designated as fall chinook spawning/sensitive areas. For additional information see Preferred Alternative, Fall Chinook Spawning/Sensitive Areas.

## **Safety Sites of Concern**

There are no specific areas designated as safety sites of concern. For additional information see the Preferred Alternative, Safety Sites of Concern.

The Oregon State Marine Board manages three no anchor zones and one pass through zone in the Hellgate Recreation Area for boating safety.

## **All Motorized Boating**

The following are specific management actions that would be applicable to all types of visitor use by motorized watercraft (see Table 2-2).

## **Season of Use**

A season of use is that part of the year when an activity that requires a permit is prescribed to occur. The season of use is year-round for all motorized boating in the Applegate and Dunn reaches, except for MTBs during May 1 through September 30. See later sections, Commercial Motorized Angling and Motorized Tour Boating.

## **Erosion Sensitive Areas**

There are no specific areas designated as erosion sensitive areas. For additional information see the Preferred Alternative, Erosion Sensitive Areas, and Table 2-2 and Map 2-1.

## **River Reach**

Motorized boating is allowed in the Applegate and Dunn reaches.

## **Thrill Power Maneuver Areas**

There are no specific areas designated as thrill power maneuver areas. For additional information see the Preferred Alternative, Thrill Power Maneuver Areas.

## **Boat Speed**

Boat speed is unregulated, except for areas at boat ramps and county-designated swim areas. The BLM acknowledges the Oregon State Marine Board's objectives of no wake zones at boat ramps and county-designated swim areas. The objectives are to enhance safety and the recreational experience of visitors in high-density user areas.



## **Two-Way Radio Communications**

Boating safety is enhanced if the operators of motorized boats have the ability to communicate with each other, especially where topography or vegetation reduces line-of-sight restrictions. Management actions would include an educational outreach that encourages the use of two-way radios by visitors using motorized watercraft and require motorized tour boats to be equipped with two-way radios.

## **Private Motorized Boating**

### **Allocation/Limits**

There would be no limits to the number of private motorized boats (see Table 2-3).

### **Season of Use/River Reach**

Private motorized boating would be year-round in the Applegate and Dunn reaches.

## **Commercial Motorized Boat Angling**

### **Season of Use**

The season of use for visitors is year-round (see Table 2-4). This season approximates historical use in 1985 (Walker and Austermuehle 1994).

### **Allocation/Limits**

Commercial motorized boat angling would be limited to an allocation or limit of two trips per day for one permit during the designated season of use.

The objectives are to provide a motorized angling opportunity for those unable to otherwise provide themselves this experience and to protect river resources and the recreational experiences of other users.

### **Number of Permits**

No new permits would be allocated in addition to the one existing commercial motorized angling permittee.

### **Boat Size**

Commercial motorized tour boats would be permitted to carry up to six anglers.

## **Commercial Motorized Tour Boating**

### **Season of Use**

The season of use for visitors is May 1 through September 30 (see Table 2-5). This season approximates historical use in 1985 (Walker and Austermuehle 1994).



## **Allocation/Limits in the Applegate Reach**

The 19-trip allocation enhances the motorized tour boaters' recreational experience during the heaviest use days of summer. The objectives are to provide a wide range of recreational opportunities, both motorized and nonmotorized, while minimizing impacts to other users. Nineteen round trips per day is the current use level acceptable to most visitors to the Hellgate Recreation Area (Oregon State University 1993).

Motorized boating would continue. Research into background documents, personal interviews and historical advertising media have shown MTB use to have been an integral part of the available recreation opportunities since 1954. This recreation activity has been occurring from Grants Pass to Grave Creek and from Gold Beach to Blossom Bar since the above referenced date. Commercial motorized tour boating would have an allocation or limit equaling a maximum of 19 round trips per day in the Applegate Reach. The allocations in the Applegate Reach represent the acknowledgment that the primary watercraft traffic is the motorized tour boat (MTB).

## **Allocation/Limits in the Dunn Reach**

Commercial motorized tour boating would have an allocation or limit equaling a maximum of 19 round trips per day in the Dunn Reach, except on the weekend days in July and August when it would be six trips per day.

The six-trip allocation enhances the recreational experience of the nonmotorized float boater (i.e., rafter, inflatable kayaker) during the heaviest use days of summer. The allocation in the Dunn Reach is an acknowledgment that the primary watercraft traffic is the nonmotorized float boater.

## **Safety Sites of Concern**

Safety sites of concern are not designated.

## **Groups/Runs**

Groups/runs are required for MTB trips. There would be a maximum of six groups per day

## **Boat Size**

Maximum boat size for MTBs are set such that two MTBs that must be less than 43 feet long and 14 feet wide and all others must be less than 36 feet long and 12 feet-6 inches wide. These boat dimensions represent the characteristics of the MTB fleet in 1985 (Walker and Austermuehle 1994).

## **Number of Permits**

Two permits would be issued. Both permits would continue to be issued to the permittee(s).

## **Notice Displays**

A notice display is required for each lead MTB in a group/run. The notice display objective is to inform other users of the numbers and the order of MTBs in a run.

## **Off Plane Procedures**

All MTBs are required to be off plane in Hellgate Canyon. The purposes of the off plane procedure are to ensure safe maneuvering in narrow, constricted areas that could be crowded with other watercraft users, to be sensitive to high visitor use areas, and to protect river resources.



## **Annual Daily Schedule**

An annual daily schedule is required. Changes to the schedule can be approved as authorized.

The purpose of an annual daily schedule is to inform other users of the approximate times MTBs would be passing certain locations on the river. This knowledge enables the other river users to minimize conflicts with motorized boaters. The MTB permittee(s) would make copies of the annual schedule available to other users and businesses. Schedules should also be available and on display at the primary place(s) of business for the MTB operation.

## **Daily Use**

Daily use is that time of day when a permitted activity is prescribed to occur. The prescribed daily use for MTBs in the Hellgate Recreation Area is 9:00 a.m. to 8:30 p.m. May through August, and 9:30 a.m. to 8:30 p.m. in September.

## **Special Motorized Boating Events**

Most common management actions applicable to other types of motorized boating traffic are not applicable to special motorized boating events, except for the season of use common to all motorized boating (see Table 2-6).

## **Allocation/Limits**

An allocation has been set that limits the number of special motorized boating events to two. The two special motorized boating events (Memorial Day Boatnik race including the unlimited class jetboat race, and the Labor Day boat race) would have an allocation that limits the duration of the event to two hours/day. This limit ensures the continuation of a popular traditional use which encompasses the highest historical usage while establishing a limit to protect river resources and other visitors' recreational experiences.

## **River Reach**

Special motorized boating events would be allowed in the Applegate and Dunn reaches.

## **Number of Permits**

The maximum number of permits that would be issued is two. The permits are for the Memorial Day Boatnik and Labor Day boat races.

## **New Special Motorized Boating Events**

Traditional motorized boating events are allowed (Memorial Day Boatnik, including the unlimited class jetboat race and Labor Day boat races). New technology watercraft events would not be allowed. Personal watercraft would not be allowed (see Table 2-6).

## **Nonmotorized Float Boating**

### **Allocation/Limits**

Carrying capacity has been identified and there is no allocation or limit to the number of nonmotorized float boats that visitors use (see Table 2-7). There were 14,238 annual float boating trips in 1991.



# **Nonmotorized Boat Angling**

## **Allocation/Limits**

Carrying capacity has not yet been identified and there is no allocation or limit to the number of nonmotorized angling boats that visitors use (see Table 2-8). There were 1,980 annual nonmotorized angling boat trips carrying 4,501 visitors in 1991.

The maximum number of boat trips occurred in May 1991, with approximately 53 nonmotorized angling boats on the water. The highest number of angling boats for fall chinook salmon was in September 1991, with approximately 22 nonmotorized angling boats on the water.

## **Season of Use/River Reach**

Nonmotorized boat angling is year-round in the Applegate and Dunn reaches.

# **Boater Fees and Permits and User Fees**

An adequate and stable funding mechanism is essential under a limited entry system. Funding would be used for resource protection, visitor services, facility development, operation, maintenance and trash collection, as well as access acquisition. There is increasing pressure for BLM to obtain a fair return for recreation investments and services. This may in part translate to establishing or increasing recreation and user fees to offset the cost of providing recreation services (see Table 2-9).

## **Commercially-Guided Watercraft**

Boater fees and permits would be required.

## **Watercraft for Private Use**

Boater fees and permits would not be required.

## **User Fees**

User fees would not be required.

# **Recreational Opportunities**

## **Camping**

### **Corridor Areas Open to Camping**

The corridor area open to camping on BLM-administered land, unless otherwise identified, is from Hellgate Park to Grave Creek. The corridor area closed to camping on BLM-administered land is the upstream segment of the Hellgate Recreation Area (i.e., near the confluence of the Applegate River with the Rogue River) to Hellgate Park.

### **Primitive Camping Areas**

Primitive camping areas are those sites without improvements, such as toilets, picnic tables, and trash cans. Interpretative information would be available about the sites in media, such as brochures (see Table 2-10).



## **Developed Camping Areas**

Developed camping areas would have one or more of the following improvements: parking, toilets, picnic tables, trash cans, fish cleaning stations, or informational signs (see Table 2-10).

## **Human Waste Pack Out**

Commercial users would be required to pack out waste at sites without toilets. Private users would not be required to pack out human waste at sites without toilets.

## **Campfires**

Campfire use would be subject to all current State of Oregon regulations. Campfires are allowed unless the area is closed by the Oregon Department of Forestry.

## **Day Limits**

The day limit or stay length on BLM-administered land is generally 14 days per site. Stay lengths may be adjusted to meet resource protection needs or to create more equitable opportunities for camping at popular sites. Any adjustments would be implemented through signing at the site. Camping is prohibited in any area posted as closed to that use. Occupying any portion of a developed or undeveloped recreation site for other than recreational purposes is prohibited as is occupying a place between 10 p.m. and 6 a.m. that is designated for day-use only.

## **Maximum Group Size**

There would be no maximum or limit to the group size per campsite.

## **Trails**

Trails would be maintained and managed to have minimum effect on other resource values and to provide for the safety of the visitor.

Brochures and maps would provide trail access information, trail locations, trail use guidelines, and trail descriptions. The trails would be signed at trailheads.

## **Develop New Trails**

New trails would not be developed (see Table 2-11).

## **Improve and Expand Existing Trails**

Existing trails would not be improved or expanded (see Table 2-11).

## **Off-Highway Vehicle Trails**

Off-highway vehicle trails would not be developed.

## **Day-Use Areas**

### **Primitive Day-Use Areas**

Primitive day-use areas are those sites without improvements, such as, toilets, picnic tables, and trash cans. Interpretative information would be available about the sites in media, such as brochures (see Table 2-12).



## **Developed Day-Use Areas**

Developed day-use areas would have one or more of the following types of improvements: parking, toilets, picnic tables, trash cans, fish cleaning stations, or informational signs (see Table 2-12).

## **Back Country Byways**

The existing Galice-Hellgate National Back Country Byway would be maintained.

## **Watchable Wildlife Sites**

Three watchable wildlife sites within the Hellgate Recreation Area would be maintained: Whitehorse, Hog Creek, and Hellgate Overlook.

## **Limited Off-Highway Vehicle Use Areas**

Four areas would be allocated as limited off-highway vehicle (OHV) use areas: Griffin Lane Complex, Rand, Rocky Bar, and Whitehorse. The purposes of the limited OHV use areas are site access to facilitate simple passage for anglers to fishing areas and the opportunity for visitors to engage in primitive vehicle camping below Hellgate Canyon.

Lands within the Hellgate Recreation Area are not allocated as open to OHV use. All lands not allocated as limited are closed to OHV use.

## **Prohibition-of-Firearm-Discharge Areas**

There are no specifically designated prohibition-of-firearm discharge areas within the Hellgate Recreation Area. However, the discharge of a firearm or any other implement capable of taking human life, causing injury, or damaging property is prohibited at any time within 150 yards of a residence, building, developed or undeveloped recreation site, occupied area, or at any time across or on any public road, or across or on any trail or body of water whereby any person or property is exposed to injury or damages as a result of such discharge.

## **Public Access**

There are presently 12 boat launch and landing sites in the Hellgate Recreation Area. These sites are: Whitehorse, Griffin, Ferry, Robertson Bridge, Hog Creek, Indian Mary, Ennis, Galice, Rand, Alameda, Argo, and Grave Creek. These areas provide optimal opportunity for boat access; however, overcrowding and rude behavior are sometimes concerns during periods of high use.

## **Maintain Existing Boat Ramps**

Four boat ramps would be maintained (see Table 2-13).

## **Improved Boat Ramps**

Argo and Rand boat access sites would be improved.

## **New Boat Ramps**

New boat ramps would not be developed.

## **Maintain Fishing Access Sites**

Two fishing access sites would be maintained (see Table 2-13).



## **New Fishing Access Sites**

Two new fishing access sites would be developed (see Table 2-13).

## **Vehicle Access Regulated**

Vehicle access and parking would not be regulated, and day-use permits would not be required for vehicle access and parking.

## **Visitor Services**

The Rand VC would continue to be maintained. The Rand staff would continue to provide customer service out of the Rand VC and the River program staff would provide administrative services out of the District Office. See Table 2-14.

# **Alternative C - Angler and Floater Enhancement/More Watercraft and Visitor Use**

The objectives of Alternative C are to enhance the angling and floating experiences. This alternative is designed to minimize potential impacts to the fisheries resource and increase fishing opportunities while enhancing the fishing experience. Alternative C would also maximize floating opportunities and protect the floating experience from the adverse impacts of other users. The character of the area would remain in a generally natural condition; however, facilities to serve the angling and floating public would be developed. Permits would be required for all watercraft users. Fees would only be required for commercial watercraft users. The number of commercial outfitters for floating and boat angling would not be limited. Except for commercial motorized tour boating and commercial motorized angling, overall recreational use levels would be unregulated and would continue to increase unless carrying capacity is reached. Limits, permits, and fees would be required for all watercraft users if their carrying capacities were reached. The sights, sounds, and interactions between individuals and groups would be moderate to high. See Tables 2-1 through 2-14 for a summary of the management requirements.

The specific management actions for Alternative C are as follows.:

## **All Watercraft Use**

The following are specific management actions that are applicable to all types of visitor use by watercraft, both motorized and nonmotorized (see Table 2-1).

## **Sound Management Areas**

One six-mile sound management area would be designated from downstream of Finley Bend to Jumpoff Joe Creek. The objectives of the sound management area are to minimize sound for all watercraft and to minimize sound intrusions for residents/landowners and other users. Management actions would include an educational outreach effort for private watercraft users and restrictions in permit stipulations for commercial users, including the prohibition of thrill power maneuvers in certain areas.

The Oregon State Marine Board regulates sound caused by private recreational motorboats. The objectives for the sound management area are in addition to and separate from, the sound standards (i.e., decibel levels) for recreational watercraft administered by the Oregon State Marine



Board. Managing the loudness of sound by limiting the use of decibel levels beyond State of Oregon Standards is not being considered.

Unreasonable noise is prohibited on BLM-administered land and water (see 43 CFR 8365.1-4 (a) (1)). For example, the sound from new water pumping facilities must not be readily noticeable to the river visitor.

## **Angling Enhancement Areas**

Angling enhancement areas would be designated (see Table 2-1). For additional information see Preferred Alternative, Angling Enhancement Areas.

## **Fall Chinook Spawning/Sensitive Areas**

Intrusions by watercraft and land-based activities into all important fall chinook spawning areas would be minimized. The objectives are to minimize disturbance to adult fall chinook spawning behavior and to minimize physical disturbance to the eggs and sac-fry in the redds during and after spawning. Watercraft would pass around major spawning/sensitive areas or pass through in the deep part of the channel and not stop in these areas if they extend across the river. Motorized watercraft use would not be allowed in thirteen major areas (see Table 2-1).

## **Safety Sites of Concern**

Safety sites of concern would be designated on an annual basis for all areas on the river where physical conditions create reduced jetboat operational options (see Glossary) and could result in accidents or unacceptable close encounters even when the best operator skill and most prudent judgements are used. Such conditions exist when operators of motorized tour boats do not have a clear line of sight and set-down conditions are not met. See alternative elements for motorized tour boats (WRC 1995).

The objective is to reduce safety risks that are a result of the operator not having information about other river users in unseen channel portions of the river.

## **All Motorized Boating**

The following are specific management actions that are applicable to all types of visitor use by motorized watercraft (see Table 2-2).

## **Season of Use**

A season of use is that part of the year when an activity that requires a permit is prescribed to occur. The season of use is May 1 through September 15 for all motorized boating in the Applegate Reach. The objective of the season of use in the Applegate Reach is to protect active adult fall chinook spawning behavior, redds, and sac-fry. See also later sections, Commercial Motorized Angling and Motorized Tour Boating.

The season of use is year-round for all motorized boating in the Dunn Reach, except May 1 through September 15. The season of use in both reaches can be extended another two weeks to September 30, providing monitoring indicates there is no spawning in the major spawning areas.

## **Erosion Sensitive Areas**

Intrusions into four important erosion sensitive areas would be minimized by watercraft and land-based activities (see Table 2-2 and Map 2-1).



Management actions would include education and designation of no wake zones in the four major erosion areas. The impacts of no wake zones would be monitored over a five-year period for their effectiveness in accomplishing objectives.

## **River Reach**

All types of motorized traffic would be allowed in the Applegate Reach within the applicable season of use. All motorized traffic is allowed in the Dunn Reach, except that commercial motorized traffic is eliminated during holidays and weekend days in both July and August. The objectives are to enhance the recreational experience of the nonmotorized float boater (i.e., rafter, inflatable kayaker) during the heaviest use days of summer and to minimize safety concerns to large congregations of float boaters (see Table 2-2).

## **Thrill Power Maneuver Areas**

Thrill power maneuver areas would not be designated and thrill power maneuvers would be prohibited throughout the Hellgate Recreation Area. The objectives of not allowing thrill power maneuver areas are to enhance neighborhood livability for landowners and protect soil resources.

## **Boat Speed**

Boat speed is unregulated, except for areas at boat ramps, county-designated swim areas, and erosion sensitive areas. The BLM acknowledges the Oregon State Marine Board's objectives of no wake zones at boat ramps and county-designated swim areas. The objectives are to enhance safety and the recreational experience of visitors in high density user areas. There would also be designated no wake zones in five areas of angler concentrations (see Table 2-2).

## **Two-Way Radio Communications**

Boating safety is enhanced if the operators of motorized boats have the ability to communicate with each other, especially where topography or vegetation reduces line-of-sight restrictions. Management actions would include an educational outreach that requires the use of two-way radios by all visitors using motorized watercraft (see Table 2-2).

The BLM Medford District Office and the MTB operators would have mutual use of the licensed MTB radio channel. The purpose would be to augment, on an as needed basis, the effectiveness and efficiency of MTB administration and monitoring.

# **Private Motorized Boating**

## **Allocation/Limits**

There would be no limits to the number of private motorized boats as long as their carrying capacity threshold is not exceeded. Limits and an allocation might be established in the future if the carrying capacity for private motorized boats is reached (see Table 2-3).

## **Season of Use/River Reach**

Private motorized boating would be allowed May 1 to September 15 the Applegate Reach. It would also be allowed year-round in the Dunn Reach, but on a rotational basis in the busy visitor use months of July and August. The rotation would be 4 days on and 10 days off throughout July and August. The objectives are to enhance the recreational experience of the nonmotorized float boater (i.e., rafter, inflatable kayaker) during the heaviest use days of summer while still providing an opportunity for motorized boating.



# **Commercial Motorized Boat Angling**

## **Season of Use**

The season of use for visitors is May 1 through September 15 (see Table 2-4).

Fall chinook spawning in the Hellgate Recreation Area is from mid-September to late December. Sac-fry remain in the gravel until late April. The season of use for commercial motorized angling traffic was identified because there is a concern that this type of traffic adversely impacts adult fall chinook spawning behavior and kills eggs and sac-fry. The season of use enhances the nonmotorized boat angling experience.

The objective of the commercial season of use is to protect active adult fall chinook spawning behavior, redds, and sac-fry. The season of use can be extended another two weeks to September 30, providing monitoring indicates there is no spawning in the major spawning areas.

## **Allocation/Limits**

Commercial motorized boat angling would be limited to an allocation or limit of two trips per day per permit during the designated season of use.

The objectives are to provide a motorized angling opportunity for those unable to otherwise provide themselves this experience and to protect river resources and the recreational experiences of other users.

## **Number of Permits**

Three permits would be allocated to the existing commercial motorized angling permittees.

## **Boat Size**

Commercial motorized tour boats would be permitted to carry up to six anglers.

# **Commercial Motorized Tour Boating**

## **Season of Use**

The season of use for visitors is May 1 through September 15 (see Table 2-5). The season of use can be extended another two weeks to September 30, providing monitoring indicates there is no spawning in the major spawning areas. See previous section, Commercial Motorized Boat Angling, for more background on the rationale.

## **Allocation/Limits in the Applegate Reach**

Commercial motorized tour boating would have an allocation or limit equaling a maximum of 12 round trips per day in the Applegate Reach. The 12-trip allocation is designed to maintain the recreational experience of the motorized tour boater during the heaviest use days of summer. The objectives are to provide a wide range of recreational opportunities, both motorized and nonmotorized, while minimizing impacts to other users.

Motorized boating would continue. Research into background documents, personal interviews and historical advertising media have shown MTB use to have been an integral part of the available recreation opportunities since 1954. This recreation activity has been occurring from



Grants Pass to Grave Creek and from Gold Beach to Blossom Bar since the above referenced date. Twelve round trips per day was the approximate use level in 1985. The allocations in the Applegate Reach represent the acknowledgment that the primary watercraft traffic is the motorized tour boat.

## **Allocation/Limits in the Dunn Reach**

Commercial motorized tour boating would be allocated a maximum of eight round trips per day in the Dunn Reach, except on the July 4th holiday and the weekend days in July and August when it would be four trips per day. The eight-trip allocation could occur any time during the daily times motorized tour boats are allowed in the planning area.

The four-trip allocation is enhances the recreational experience of the nonmotorized float boater (i.e., rafter, inflatable kayaker) during the heaviest use days of summer. The four-trip per day allocation would be allocated to the morning hours (i.e., the motorized tour boat trips would be upstream of the Dunn Reach by noon). The allocation in the Dunn Reach represents an acknowledgment that the primary watercraft traffic is the nonmotorized float boater.

## **Safety Sites of Concern**

Land or lead boat spotters would be required when the view and set down conditions are not met. See previous section, All Watercraft Use, for more background on the rationale.

## **Groups/Runs**

Groups/runs are required for MTB trips. There would be a maximum of six groups per day (i.e., three groups per permit). The objective is to limit the encounters with other users. MTBs in a run would average less than two minutes apart to accomplish this objective.

## **Boat Size**

The maximum length and width dimensions for all MTBs would be 36 feet or less in length and 12.6 feet or less in width. Boats currently being used that exceed these dimensions would be phased out over a period of two seasons after the Record of Decision is signed.

## **Number of Permits**

Two permits would be issued. Both permits would continue to be issued to the existing permittee(s).

## **Notice Displays**

A notice display would be required for all MTBs in a group/run. The notice display objective is to inform other users of the numbers and the order of MTBs in a run.

## **Off Plane Procedures**

All MTBs are required to be off plane in Hellgate Canyon, boat ramps, county-designated swim areas, erosion sensitive areas, and in some bank angling concentration areas (see Table 2-5). The purposes of the off plane procedure are to ensure safe maneuvering in narrow, constricted areas that could be crowded with other watercraft users, to be sensitive to high visitor use areas, and to protect river resources.



## **Annual Daily Schedule**

An annual daily schedule is required. Deviations from the permitted schedule would not be authorized.

The purpose of a fixed annual daily schedule is to inform other users of the approximate time MTBs would be passing certain locations on the river. This knowledge enables the other river users to minimize conflicts with motorized boaters. The MTB permittee(s) would make copies of the annual schedule available to other users and businesses. Schedules should also be available and on display at the primary place(s) of business for the MTB operation.

## **Daily Use**

Daily use is that time of day when a permitted activity is prescribed to occur. The prescribed daily use for MTBs in the Hellgate Recreation Area is 10:30 a.m. to 7:00 p.m. May through September. A significant goal of the prescribed daily use times is to enhance angling activities during the early morning prime fishing period.

## **Special Motorized Boating Events**

Most common management actions applicable to other types of motorized boating traffic are not applicable to special motorized boating events, except for the season of use common to all motorized boating (see Table 2-6).

### **Allocation/Limits**

Special motorized boating events (the Memorial Day Boatnik race including the unlimited class jet boat race, and the Labor Day boat race) would not have an allocation that limits the time for the event.

### **River Reach**

Special motorized boating events would not be permitted in the Hellgate Recreation Area.

### **Number of Permits**

Permits would not be issued for special motorized boating events.

### **New Specialized Motor Boat Events**

New specialized motor boat events would not be allowed.

## **Nonmotorized Float Boating**

### **Allocation/Limits**

No allocation/limits would be prescribed now. There would be an allocation prescribed in the future if the carrying capacity is reached (see Table 2-7).

The social carrying capacity for floaters is reached when the average high watercraft use for the 4th of July holiday and the weekend days of July and August exceeds the upper limit encounter standard of 500 watercraft per day. The current high use average in the Dunn Reach is 350 watercraft per day, which is 70 percent of carrying capacity.



Management actions would also include an educational outreach that would encourage floaters to voluntarily stay off the river during the first three or four hours of daylight during peak fishing periods, especially September through November.

## **Nonmotorized Boat Angling**

### **Allocation/Limits**

No allocation/limits would be prescribed now (see Table 2-8). There would be an allocation prescribed in the future if the carrying capacity for nonmotorized boat angling is reached for a rural river recreation opportunity spectrum class (see Appendix E).

### **Season of Use/River Reach**

Nonmotorized boat angling would be year-round in the Applegate and Dunn reaches.

## **Boater Fees and Permits and User Fees**

An adequate and stable funding mechanism is essential under a limited entry system. Funding would be used for resource protection, visitor services, facility development, operation, maintenance and trash collection, as well as access acquisition. There is increasing pressure for BLM to obtain a fair return for recreation investments. This may in part translate to establishing or increasing recreation and user fees to offset the cost of providing recreation services (see Table 2-9).

### **Commercially-Guided Watercraft**

Boater fees and permits would be required.

There would be an allocation or a limit to the number of commercial permits in the future if a subsequently determined carrying capacity is reached.

### **Watercraft for Private Use**

Boater fees for private use would not be required. Boater fees would be required if carrying capacity is reached.

Boater permits for private use would be required. There would be no limits to the number of nonmotorized boat angling, nonmotorized float boating, and motorized boating services and activities. Permits would be required in the future if carrying capacity is reached.

### **User Fees**

User fees would not be required.



# Recreational Opportunities

## Camping

### Corridor Areas Open to Camping

The corridor area open to camping on BLM-administered land, unless otherwise identified, is from Hellgate Park to Grave Creek. The corridor area closed to camping on BLM-administered land is the upstream segment of the Hellgate Recreation Area (i.e., near the confluence of the Applegate River with the Rogue River) to Hellgate Park.

### Primitive Camping Areas

Primitive camping areas are those sites without improvements, such as toilets, picnic tables, and trash cans. Interpretative information would be available about the sites in media, such as brochures (see Table 2-10).

### Developed Camping Areas

Developed camping areas would have one or more of the following improvements: parking, toilets, picnic tables, trash cans, fish cleaning stations, or informational signs (see Table 2-10).

### Human Waste Pack Out

Commercial and private users would be required to pack out human waste at sites without toilets.

### Campfires

Campfire use would be subject to all current State of Oregon regulations. Fire pans would be required on all BLM-administered land where fire grates (or equivalent) or developed fire pits are not provided.

### Day Limits

The prescribed day limits to camping would be five days per site during the high summer use season of July and August, unless otherwise posted. Five days was identified as a maximum to allow a wide number of people to use a given site while still allowing a group to occupy a site for an entire holiday weekend. The day limits to camping outside the high summer use season would be 14 days per site unless otherwise posted.

### Maximum Group Size

The maximum prescribed group size would be 30 people at any gathering area unless a larger group size is authorized.

## Trails

Trails would be designed, constructed, maintained, and managed to have minimum effect on other resource values and to provide for the safety of the visitor.

Brochures and maps would provide trail access information, trail locations, trail use guidelines, and trail descriptions. The trails would be signed at trailheads.

### Develop New Trails

Three new trails would be developed (see Table 2-11).



## **Improve and Expand Existing Trails**

Four existing trails would be improved (see Table 2-11).

## **Off-Highway Vehicle Trails**

The existing Buckhorn Mountain off-highway vehicle (OHV) trail would continue to be open to all forms of one-track transportation with a development and design focus toward motorized trail bikes (its dominant present use). This trail allocation would be governed by the standards for limited OHV use areas as defined in the Medford District RMP, except that the design would be a linear trail with a right-of-way designed for trail bikes.

The Buckhorn Mountain Trail would be a combination of trail on BLM-administered land within and outside the Hellgate Recreation Area that would tie into the U.S. Forest Service system of trails. This trail system would link the Rogue River with the Illinois River. The U.S. Forest Service trail is open to OHVs and the missing link in the trail system is the portion leading to the Rogue River.

## **Day-Use Areas**

### **Primitive Day-Use Areas**

Primitive day-use areas are those sites without improvements, such as toilets, picnic tables, and trash cans. Interpretative information would be available about the sites in media, such as brochures (see Table 2-12).

### **Developed Day-Use Areas**

Developed day-use areas would have one or more of the following types of improvements: parking, toilets, picnic tables, trash cans, fish cleaning stations, or informational signs (see Table 2-12).

### **Back Country Byways**

The existing Galice-Hellgate National Back Country Byway would be maintained.

### **Watchable Wildlife Sites**

Three watchable wildlife sites within the Hellgate Recreation Area would be maintained: Whitehorse (i.e., Applegate Landing), Hog Creek Landing, and Hellgate Overlook (i.e., Hellgate Canyon Viewpoint). Two new watchable wildlife sites would be added at Flanagan Slough and Griffin Park/Griffin Lane Complex.

### **Limited Off-Highway Vehicle Use Areas**

Eight areas would be allocated as limited off-highway vehicle (OHV) use areas (see Table 2-12). The purposes of the limited OHV use areas are site access to facilitate simple passage for anglers to fishing areas and the opportunity for visitors to engage in primitive vehicle camping below Hellgate Canyon.

Lands within the Hellgate Recreation Area would not be allocated as open to OHV use areas. All lands not allocated as limited are closed to OHV use areas.



## **Prohibition-of-Firearm-Discharge Areas**

Eight areas are designated as prohibition-of-firearm discharge areas during the high summer visitor use period from June 1 through September 15 (see Table 2-12). All permitted hunting activities are allowed.

Discharge of a firearm or any other implement capable of taking human life, causing injury, or damaging property is prohibited at any time within 150 yards of a residence, building, developed or undeveloped recreation site, occupied area, or at any time across or on any public road, or across or on any trail or body of water whereby any person or property is exposed to injury or damages as a result of such discharge.

## **Public Access**

There are presently 12 boat launch and landing sites in the Hellgate Recreation Area. These sites are: Whitehorse, Griffin, Ferry, Robertson Bridge, Hog Creek, Indian Mary, Ennis, Galice, Rand, Alameda, Argo, and Grave Creek. These areas provide optimal opportunity for boat access; however, overcrowding and rude behavior are sometimes concerns during periods of high use.

### **Maintain Existing Boat Ramps**

The Hog Creek boat ramp is on land administered by Josephine County. It would be maintained by Josephine County, the Oregon State Marine Board, and the BLM.

### **Improved Boat Ramps**

Four boat ramps would be improved (see Table 2-13).

### **New Boat Ramps**

New boat ramps would not be constructed.

### **Maintain Fishing Access Sites**

Two fishing access sites would be maintained (see Table 2-13).

### **New Fishing Access Sites**

Three new fishing access sites would be developed (see Table 2-13).

### **Vehicle Access Regulated**

Vehicle access and parking would not be regulated, and day-use permits would not be required for vehicle access or parking.

## **Visitor Services**

The Rand VC would continue to be maintained. A new VC would be constructed at Hog Creek. The Rand staff would provide customer service out of the new VC. The River program staff would provide administrative services out of the District Office. See Table 2-14.



# Alternative D - Maximum Watercraft and Visitor Use

The objectives of Alternative D are to maximize the level of recreational use while protecting the environment. The sights, sounds, and interactions with other individuals or groups would often be high. The character of the area would remain in a generally natural condition. Facilities to enhance recreational opportunities, such as camping, boating, angling, and vehicle-oriented activities, would be developed. On-site management and controls would be obvious, but limited to those necessary for public health and safety, and to accommodate increased numbers of visitors. Fees and permits would be required for all watercraft users. The number of commercial outfitters for floating and boat angling would not be limited. Commercial motorized tour boating (i.e., maximum of 26 round-trips per day) and commercial motorized angling would be regulated, but at a higher level of use than the other alternatives. Overall recreational use levels would continue to increase causing a high degree of interaction between individuals and groups. See Tables 2-1 through 2-14 for a summary of the management requirements.

The specific management actions for Alternative D are as follows:

## All Watercraft Use

The following are specific management actions that are applicable to all types of visitor use by both motorized and nonmotorized watercraft (see Table 2-1).

### Sound Management Areas

There are no specific areas managed for sound. The objectives of the sound management area are to minimize sound for all watercraft users and to minimize sound intrusions for residents/landowners and other users.

The Oregon State Marine Board regulates sound caused by private recreational motorboats. The objectives for the sound management areas are in addition to and separate from, the sound standards (i.e., decibel levels) for recreational watercraft administered by the Oregon State Marine Board. Managing the loudness of sound by limiting the use of decibel levels beyond the State of Oregon standards is not being considered.

Unreasonable noise is prohibited on BLM-administered land and water (See 43 CFR 8365.1-4 (a) (1).) For example, the sound from new water pumping facilities must not be readily noticeable to the river visitor. Management actions would also include an educational outreach for visitors by watercraft.

### Angling Enhancement Areas

Angling enhancement areas would be designated.

### Fall Chinook Spawning/Sensitive Areas

Intrusions into four major fall chinook spawning areas by watercraft and land-based activities would be minimized (see Table 2-1). The objectives are to minimize disturbance to the adult fall chinook spawning behavior and to minimize physical disturbance to the eggs and sac-fry in the redds during and after spawning. Watercraft will pass around major spawning/sensitive areas or pass through in the deep part of the channel and not stop in these areas if they extend across the river.



## **Safety Sites of Concern**

Safety sites of concern would be designated on an annual basis for all areas on the river where physical conditions create reduced jetboat operational options (see Glossary) that could result in accidents or unacceptable close encounters (see Glossary) even when the best operator skill and most prudent judgements are used. Such conditions exist when operators of motorized tour boats do not have a clear line of sight and set-down conditions are not met. (See Alternative Elements for Motorized Tour Boats) (WRC 1995).)

The objective is to reduce safety risks that are a result of the operator not having information about other river users in unseen channel portions of the river.

## **All Motorized Boating**

The following are specific management actions that are applicable to all types of visitor use by motorized watercraft (see Table 2-2).

### **Season of Use**

A season of use is that part of the year when an activity that requires a permit is prescribed to occur. The season of use is year-round for all motorized boating in the Hellgate Recreation Area, except for MTBs during April 1 through October 31. See later sections, Commercial Motorized Angling and Motorized Tour Boating.

### **Erosion Sensitive Areas**

Intrusions into two major erosion sensitive areas would be minimized by watercraft and land-based activities (see Table 2-2 and Map 2-1).

Management actions would include education and interim no wake zones in the two major areas. Impacts of no wake zones would be monitored over a five-year period for their effectiveness in accomplishing objectives.

### **River Reach**

All types of motorized traffic are allowed in the Applegate and Dunn reaches during the applicable season of use.

### **Thrill Power Maneuver Areas**

Some thrill power maneuver areas are identified. These areas would be outside the two major erosion sensitive areas.

### **Boat Speed**

Boat speed is unregulated, except for areas at boat ramps, county-designated swim areas, and erosion sensitive areas. The BLM acknowledges the Oregon State Marine Board's objectives of no wake zones at boat ramps and county-designated swim areas. The objectives are to enhance safety and the recreational experience of visitors in high density user areas. There would also be designated no wake zones in five areas of angler concentrations (see Table 2-2).



## **Two-Way Radio Communications**

Boating safety is enhanced if the operators of motorized boats have the ability to communicate with each other, especially where topography or vegetation reduces line-of-sight restrictions. Management actions would include an educational outreach that requires the use of two-way radios by all visitors using motorized watercraft.

## **Private Motorized Boating**

### **Allocation/Limits**

There would be no limits to the number of private motorized boats (see Table 2-3).

### **Season of Use/River Reach**

Private motorized boating would be year-round in the Applegate and Dunn reaches.

## **Commercial Motorized Boat Angling**

### **Season of Use**

The season of use for visitors is May 1 through September 15 (see Table 2-4).

Fall chinook spawning in the Hellgate Recreation Area is from mid-September to late December. Sac-fry remain in the gravel until late April. The season of use for commercial motorized angling traffic was identified because there is a concern that this type of traffic adversely impacts adult fall chinook spawning behavior and kills eggs and sac-fry. The season of use enhances the nonmotorized boat angling experience.

The objective of the commercial season of use is to protect active adult fall chinook spawning behavior, redds, and sac-fry. The season of use can be extended another two weeks to September 30, providing monitoring indicates there is no spawning in the major spawning areas.

### **Allocation/Limits**

Commercial motorized boat angling would be limited to an allocation or limit of two trips per day per permit during the designated season of use.

The objectives are to provide a motorized angling opportunity for those unable to otherwise provide themselves this experience and protect river resources and the recreational experiences of other users.

### **Number of Permits**

Thirty permits would be allocated to commercial motorized boat angling. Three of these permits would be allocated to the existing commercial motorized angling permittees.

### **Boat Size**

Commercial motorized tour boats would be permitted to carry up to ten anglers.



# Commercial Motorized Tour Boating

## Season of Use

The season of use for visitors is April 1 through October 31 (see Table 2-5).

## Allocation/Limits in the Applegate Reach

Commercial motorized tour boating would have an allocation or limit equaling a maximum of 26 round trips per day in the Applegate Reach. The objectives are to provide a wide range of recreational opportunities, both motorized and nonmotorized, while minimizing impacts to other users. The 26-trip allocation enhances the motorized tour boaters' recreational experience during the heaviest use days of summer.

The two existing permits would be allocated 19 of the 26 round trips per day. The other seven round trips per day would be allocated to two new permits.

Motorized boating would continue. Research into background documents, personal interviews and historical advertising media have shown MTB use to have been an integral part of the available recreation opportunities since 1954. This recreation activity has been occurring from Grants Pass to Grave Creek and from Gold Beach to Blossom Bar since the above referenced date. The allocations in the Applegate Reach represent the acknowledgment that the primary watercraft traffic is the motorized tour boat.

## Allocation/Limits in the Dunn Reach

Commercial motorized tour boating would be allocated a maximum of 16 round trips per day in the Dunn Reach, except on the July 4th holiday and the weekend days in July and August when it would be eight trips per day.

The two existing permits would be allocated eight of the 16 round trips per day. The other eight round trips per day would be allocated to two new permits. The two existing permits would be allocated to four of the eight round trips per day on the July 4th and the heavy use weekend days in July and August.

The four-trip allocation enhances the recreational experience of the nonmotorized float boater (i.e., rafter, inflatable kayaker) during the heaviest use days of summer. The allocation in the Dunn Reach represents and acknowledgement that the primary watercraft traffic is the nonmotorized float boater.

## Safety Sites of Concern

Land or lead boat spotters would be required when the view and set down conditions are not met. See previous section, All Watercraft Use, for more background on the rationale.

## Groups/Runs

Groups/runs are required for MTB trips. There would be a maximum of six groups per day (i.e., three groups per permit). The objective is to limit encounters with other users. Motorized tour boats in a run would average less than two minutes apart to accomplish this objective.

## Boat Size

Two motorized tour boats can reach 43 feet in length and 14 feet in width. The maximum length and width dimensions for all MTBs would be 36 feet or less in length and 12.6 feet or less in width.



## **Number of Permits**

Four permits would be issued. Both permits would continue to be issued to the existing permittees.

## **Notice Displays**

A notice display would be required for all motorized tour boats (MTBs) in a group/run. The notice display objective is to inform other users of the numbers and the order of MTBs in a run.

## **Off Plane Procedures**

All MTBs are required to be off plane in Hellgate Canyon, boat ramps, county-designated swim areas, erosion sensitive areas, and in some bank angling concentration areas (see Table 2-5). The purposes of the off plane procedure are to ensure safe maneuvering in narrow, constricted areas that could be crowded with other watercraft users, to be sensitive to high visitor use areas, and to protect river resources.

## **Annual Daily Schedule**

An annual daily schedule is required. Schedule changes to an approved schedule could be authorized by the BLM.

The purpose of an annual daily schedule is to inform other users of the approximate times MTBs would be passing certain locations on the river. This knowledge enables the other river users to minimize conflicts with motorized boaters. The MTB permittee(s) would make copies of the annual schedule available to other users and businesses. Schedules would also be available and on display at the primary place(s) of business for the MTB operation.

## **Daily Use**

The prescribed daily use for MTBs in the Hellgate Recreation Area is during the daylight hours of the season of use from April through October.

## **Special Motorized Boating Events**

Most common management actions applicable to other types of motorized boating traffic are not applicable to special motorized boating events, except for the season of use common to all motorized boating (see Table 2-6).

## **Allocation/Limits**

Special motorized boating events, such as Memorial Day Boatnik, the unlimited class jet boat race, and the Labor Day boat races, would not have an allocation that limits the time of the event.

## **River Reach**

Special motorized boating events would be considered year-round in the Applegate and Dunn reaches.

## **Number of Permits**

A maximum of five permits would be issued for special motorized boating events. The two existing permits are for the Memorial Day Boatnik race including the unlimited class jetboat race,



and the Labor Day boat race. Both permits would continue to be issued to the existing permittees. The three new permits would be issued under a rationing technique identified as bid and prospectus (see Glossary). The analysis would require that the permits protect and enhance the outstandingly remarkable values (ORVs) for which the Rogue River was included in the National Wild and Scenic Rivers System.

Traditional motorized boating events are allowed within the Hellgate Recreation Area. Nontraditional events, such as the unlimited class jet boat events and the use of hovercraft, would be considered on a case-by-case basis. For example, a new event might be a combination of the Memorial Day Boatnik race including an unlimited class jet boat race. Personal watercraft would not be allowed.

## **New Specialized Motor Boat Events**

New specialized motor boat events would be considered on a case-by-case basis.

## **Nonmotorized Float Boating**

### **Allocation/Limits**

Allocation/limits would not be prescribed (see Table 2-7).

## **Nonmotorized Boat Angling**

### **Allocation/Limits**

Allocation/limits would not be prescribed (see Table 2-8).

### **Season of Use/River Reach**

Nonmotorized boat angling would be year-round in the Applegate and Dunn reaches.

## **Boater Fees and Permits and User Fees**

An adequate and stable funding mechanism is essential under a limited entry system. Funding would be used for resource protection, visitor services, facility development, operation, maintenance and trash collection, as well as access acquisition. There is increasing pressure for BLM to obtain a fair return for recreation investments. This may in part translate to establishing or increasing recreation and user fees to offset the cost of providing recreation services (see Table 2-9).

### **Commercially-Guided Watercraft**

Boater fees and permits would be required.

### **Watercraft for Private Use**

Boater fees would be required.

Boater permits for private use would be required. There would be no limit to the number of permits authorized for nonmotorized boat angling, nonmotorized float boating, or private motorized boating services or activities.



## **User Fees**

User fees would be required for all visitor use by watercraft and vehicle parking at BLM-administered day-use areas within the Hellgate Recreation Area.

## **Recreational Opportunities**

### **Camping**

#### **Corridor Areas Open to Camping**

The corridor area open to camping on BLM-administered land, unless otherwise identified, is from Hellgate Park to Grave Creek. The corridor area closed to camping on BLM-administered land is the upstream segment of the Hellgate Recreation Area (i.e., near the confluence of the Applegate River with the Rogue River) to Hellgate Park.

#### **Primitive Camping Areas**

Primitive camping areas are those sites without improvements, such as toilets, picnic tables, and trash cans. Interpretative information would be available about the sites in media, such as brochures (see Table 2-10).

#### **Developed Camping Areas**

Developed camping areas would have one or more of the following improvements: parking, toilets, picnic tables, trash cans, fish cleaning stations, or informational signs (see Table 2-10).

#### **Human Waste Pack Out**

Commercial and private users would be required to pack out human waste at sites without toilets.

#### **Campfires**

Campfire use would be subject to all current State of Oregon regulations. Fire pans would be required on all BLM-administered land where fire grates (or equivalent) or developed fire pits are not provided.

#### **Day Limits**

The prescribed day limits to camping would be four days per site during the high summer use season of July and August, unless otherwise posted. Four days were identified as a maximum to allow a wide number of people to use a given site while still allowing a group to occupy a site for an entire holiday weekend. The day limits to camping outside the high summer use season would be 14 days per site, unless otherwise posted.

#### **Maximum Group Size**

The maximum prescribed group size would be 30 people at any gathering area unless a larger group size is authorized.

### **Trails**

Trails would be designed, constructed, maintained, and managed to have minimum effect on other resource values and to provide for the safety of the visitor.



Brochures and maps would provide trail access information, trail locations, trail use guidelines, and trail descriptions. The trails would be signed at trailheads.

### **Develop New Trails**

Nine new trails would be developed (see Table 2-11).

### **Improve and Expand Existing Trails**

Eight existing trails would be improved (see Table 2-11).

### **Off-Highway Vehicle Trails**

The existing Buckhorn Mountain and Robert Dean off-highway vehicle (OHV) trails would continue to be open to all forms of one-track transportation with a development and design focus toward motorized trail bikes (its dominant present use). This trail allocation would be governed by the standards for limited OHV use areas as described in the Medford District RMP, except that the design would be a linear trail with a right-of-way designed for trail bikes.

The Buckhorn Mountain Trail would be a combination of trail on BLM-administered land within and outside the Hellgate Recreation Area that would tie into the U.S. Forest Service system of trails. This trail system would link the Rogue River with the Illinois River. The U.S. Forest Service trail is open to OHVs and the missing link in the trail system is the portion leading to the Rogue River.

The Robert Dean Trail would be a combination of approximately eight miles of existing trails on BLM-administered land within and outside the Hellgate Recreation Area. The trail would link the Hellgate Recreation Site with the Robert Dean Placer Mine.

## **Day-Use Areas**

### **Primitive Day-Use Areas**

Primitive day-use areas are those sites without improvements, such as toilets, picnic tables, and trash cans. Interpretative information would be available about the sites in media, such as brochures (see Table 2-12).

### **Developed Day-Use Areas**

Developed day-use areas would have one or more of the following types of improvements: parking, toilets, picnic tables, trash cans, fish cleaning stations, or informational signs (see Table 2-12).

### **Back Country Byways**

The existing Galice-Hellgate National Back Country Byway would be maintained.

### **Watchable Wildlife Sites**

Three watchable wildlife sites within the Hellgate Recreation Area would be maintained: Whitehorse (i.e., Applegate Landing), Hog Creek Landing, and Hellgate Overlook (i.e., Hellgate Canyon Viewpoint). Three new watchable wildlife sites would be added at Flanagan Slough, Ferry Road River Front, and Griffin Park/Griffin Lane Complex.



## **Limited Off-Highway Vehicle Use Areas**

Twelve areas would be allocated as limited off-highway vehicle (OHV) use areas (see Table 2-12). The purposes of the limited OHV use areas are site access to facilitate simple passage for anglers to fishing areas and the opportunity for visitors to engage in primitive vehicle camping below Hellgate Canyon.

Lands within the Hellgate Recreation Area would not be allocated as open to OHV use. All lands not allocated as limited are closed to OHV use.

## **Prohibition-of-Firearm Discharge Areas**

The entire Hellgate Recreation Area is designated a prohibition of firearm discharge area year-round.

Discharge of a firearm or any other implement capable of taking human life, causing injury, or damaging property is prohibited at any time within 150 yards of a residence, building, developed or undeveloped recreation site, occupied area, or at any time across or on any public road, or across or on any trail or body of water whereby any person or property is exposed to injury or damages as a result of such discharge.

# **Public Access**

There are presently 12 boat launch and landing sites in the Hellgate Recreation Area. These sites are: Whitehorse, Griffin, Ferry, Robertson Bridge, Hog Creek, Indian Mary, Ennis, Galice, Rand, Almeda, Argo, and Grave Creek. These areas provide optimal opportunity for boat access; however, overcrowding and rude behavior are sometimes concerns during periods of high use.

## **Maintain Existing Boat Ramps**

The Hog Creek boat ramp is on land administered by Josephine County. It would be maintained by Josephine County, the Oregon State Marine Board, and the BLM.

## **Improved Boat Ramps**

Five boat ramps would be improved (see Table 2-13). Two obsolete boat ramps would be rehabilitated and a new concrete boat ramp would be constructed at Griffin.

## **New Boat Ramps**

Two new boat ramps would be constructed (see Table 2-13).

## **Maintain Fishing Access Sites**

Two fishing access sites would be maintained (see Table 2-13).

## **New Fishing Access Sites**

Four new fishing access sites would be developed (see Table 2-13).

## **Vehicle Access Regulated**

Vehicle access would be regulated. Day-use parking passes would be required on all vehicles on BLM-administered land within the Hellgate Recreation Area.



## **Visitor Services**

The Rand VC would continue to be maintained. A new VC would be constructed in Rand. The Rand staff would provide customer and administrative services out of the new VC. The River program staff would provide administrative services out of the District Office. See Table 2-14.

## **Alternative E - Preferred Alternative**

The objectives of Alternative E, the Preferred Alternative, are to increase the level of recreational use while protecting the environment. The sights, sounds, and interactions with other individuals or groups would often be high. The character of the area would remain in a generally natural condition. This alternative is designed to minimize potential impacts to the fisheries resource, increase fishing opportunities and enhancing the fishing experience. The Preferred Alternative would also maximize floating opportunities and protect the visitors' floating experience from the adverse impacts of other users. Permits and fees would only be required for commercial watercraft users. The number of commercial outfitters for floating and boat angling are not limited now. Limits may be allocated in the future if carrying capacities are reached. Except for commercial motorized tour boating, commercial motorized angling, and special motorized boating events, overall recreational use levels would be unregulated and allowed to increase until carrying capacity is reached. Limits, permits, and fees would be required for all watercraft users if carrying capacities are reached. See Tables 2-1 through 2-14 for a summary of the management requirements.

The specific management actions for Alternative E are as follows:

### **All Watercraft Use**

The following are specific management actions that would be applicable to all types of visitor use by both motorized and nonmotorized watercraft (see Table 2-1).

### **Sound Management Areas**

One four-mile sound management area would be designated from Flanagan Slough to Jumpoff Joe Creek. Management actions would include an educational outreach effort for private watercraft users and restrictions in permit stipulations for commercial users, including the prohibition of thrill power maneuvers in the sound management area before 10:00 a.m. or after 5:00 p.m. The objectives of the sound management area are to minimize sound for all watercraft users and to minimize sound intrusions for residents/landowners and other users.

The Oregon State Marine Board regulates sound caused by private recreational motorboats. The objectives for the sound management area are in addition to and separate from, the sound standards (i.e., decibel levels) for recreational watercraft administered by the Oregon State Marine Board. Managing the loudness of sound by limiting decibel levels beyond the State of Oregon standards is not being considered.

Unreasonable noise is prohibited on BLM-administered land and water. (See 43 CFR 8365.1-4 (a) (1).) For example, the sound from new water pumping facilities must not be readily noticeable to the river visitor.

### **Angling Enhancement Areas**

Eight angling enhancement areas would be designated (see Table 2-1).



## **Fall Chinook Spawning/Sensitive Areas**

Intrusions into four major fall chinook spawning areas by watercraft and land-based activities would be minimized (see Table 2-1). The objectives are to minimize disturbance to adult fall chinook spawning behavior and to minimize physical disturbance to the eggs and sac-fry in the redds during and after spawning. Watercraft would pass around major spawning/sensitive areas or pass through in the deep part of the channel and not stop in these areas if they extend across the river.

## **Safety Sites of Concern**

Safety sites of concern would be designated on an annual basis for all areas on the river where physical conditions create reduced jetboat operational options (see Glossary) that could result in accidents or unacceptable close encounters (see Glossary) even when the best operator skill and most prudent judgements are used. Such conditions exist when operators of motorized tour boats do not have a clear line of sight and set-down conditions are not met. (See Alternative Elements for Motorized Tour Boats) (WRC 1995).)

The objective is to reduce safety risks that are a result of the operator not having information about other river users in unseen channel portions of the river.

## **All Motorized Boating**

The following are specific management actions that would be applicable to all types of visitor use by motorized watercraft (see Table 2-2).

## **Season of Use**

A season of use is that part of the year when an activity that requires a permit is prescribed to occur. The season of use is year-round for all motorized boating in the Applegate and Dunn reaches, except for commercial motorized boating, which is May 1 through September 15. See later sections, Commercial Motorized Angling and Motorized Tour Boating.

The season of use can be extended another two weeks to September 30, providing monitoring indicates there is no spawning in the major spawning areas.

## **Erosion Sensitive Areas**

Intrusions into four major erosion sensitive areas would be minimized by watercraft and land-based activities (see Table 2-2 and Map 2-1). Impacts of no wake zones would be monitored over a five-year period for their effectiveness in accomplishing objectives.

## **River Reach**

All types of motorized traffic would be allowed in the Applegate Reach within the applicable season of use. All motorized traffic is allowed in the Dunn Reach, except that commercial motorized traffic is eliminated during the afternoon of the holiday and weekend days in both July and August. The objectives are to enhance the recreational experience of the nonmotorized float boater (i.e., rafter, inflatable kayaker) during the heaviest use days of summer and to minimize safety concerns to large congregations of float boaters (see Table 2-2).

## **Thrill Power Maneuver Areas**

Thrill power maneuver areas are permitted, except in the four major erosion sensitive areas at any



time or in the designated sound management area before 10:00 a.m. and after 5:00 p.m. The objective is to enhance the recreational experience of motorized tour boaters in designated areas.

## **Boat Speed**

Boat speed is unregulated, except for areas at boat ramps, county-designated swim areas, and erosion sensitive areas. The BLM acknowledges the Oregon State Marine Board's objectives of no wake zones at boat ramps and county-designated swim areas. The objectives are to enhance safety and the recreational experience of visitors in high density user areas and to protect soil resources.

## **Two-Way Radio Communications**

Boating safety is enhanced if the operators of motorized boats have the ability to communicate with each other, especially where topography or vegetation reduces line-of-sight restrictions. Management actions would include an educational outreach that encourages the use of two-way radios by visitors using motorized watercraft and requires motorized tour boats (MTBs) to be equipped with two-way radios.

The BLM Medford District Office and the MTB operators would have mutual use of the licensed MTB boat radio channel. The purpose would be to augment, on an as-needed basis, the effectiveness and efficiency of MTB administration and monitoring.

## **Private Motorized Boating**

### **Allocation/Limits**

There would be no limits to the number of private motorized boats as long as their carrying capacity threshold is not exceeded. Limits and an allocation might be established in the future if the carrying capacity for private motorized boats is reached (see Table 2-3).

### **Season of Use/River Reach**

Private motorized boating would be year-round in the Applegate Reach. It would also be year-round in the Dunn Reach, except for the afternoons of the 4th of July holiday and weekend days in both July and August. The objective is to enhance the recreational experience of the nonmotorized float boater (i.e., rafter, inflatable kayaker) during the heaviest use days of summer.

## **Commercial Motorized Boat Angling**

### **Season of Use**

The season of use for visitors is May 1 through September 15 (see Table 2-4).

Fall chinook spawning in the Hellgate Recreation Area is from mid-September to late December. Sac-fry remain in the gravel until late April. The season of use for commercial motorized angling traffic was identified because there is a concern that this type of traffic adversely impacts adult fall chinook spawning behavior and kills eggs and sac-fry. The season of use enhances the nonmotorized boat angling experience.

The objective of the commercial season of use is to protect active adult fall chinook spawning behavior, redds, and sac-fry. The season of use can be extended another two weeks to September 30, providing monitoring indicates there is no spawning in the major spawning areas.



## **Allocation/Limits**

Commercial motorized boat angling would be limited to an allocation or limit of two trips per day for two permits during the designated season of use, and two trips per year for one permit. Additional trips could be allocated on a case-by-case basis.

## **Number of Permits**

Three permits would be allocated to the existing commercial motorized angling permittees. Additional permits for the designated season of use could be allocated on a case-by-case basis.

## **Boat Size**

Commercial motorized tour boats would be permitted to carry up to six anglers.

# **Commercial Motorized Tour Boating**

## **Season of Use**

The season of use for visitors is May 1 through September 15 (see Table 2-5). The season of use can be extended another two weeks to September 30, providing monitoring indicates there is no spawning or pairing behavior in the major spawning areas. See previous section, Commercial Motorized Angling, for more background on the rationale.

## **Allocation/Limits in the Applegate Reach**

The 19-trip allocation enhances the recreational experience of the motorized tour boater during the heaviest use days of summer. The objectives are to provide a wide range of recreational opportunities, both motorized and nonmotorized, while minimizing impacts to other users. Nineteen round trips per day is the current use level acceptable to most visitors to the Hellgate Recreation Area (Oregon State University 1993).

Motorized boating would continue. Research into background documents, personal interviews and historical advertising media have shown MTB use to have been an integral part of the available recreation opportunities since 1954. This recreation activity has been occurring from Grants Pass to Grave Creek and from Gold Beach to Blossom Bar since the above referenced date. Section 10 (a) of the National Wild and Scenic Rivers Act of 1968 states (in part) "Other uses are allowed which do not substantially interfere with public use and enjoyment of these values." See Chapter 1, National Wild and Scenic Rivers Act. Commercial motorized tour boating would have an allocation or limit equaling a maximum of 19 round trips per day in the Applegate Reach. The allocations in the Applegate Reach represent an acknowledgment that the primary watercraft traffic is the motorized tour boat (MTB) during the warm summer months.

## **Allocation/Limits in the Dunn Reach**

Commercial motorized tour boating would be allocated a maximum of eight round trips per day in the Dunn Reach, except on the July 4th holiday and the weekend days in July and August when it would be four trips per day. The eight-trip allocation could occur any time during the daily times MTBs are allowed in the planning area. The four-trip per day allocation would be allocated to the morning hours so that the motorized tour boat trips would be upstream of the Dunn Reach by noon.



The allocation in the Dunn Reach is an acknowledgment that the primary watercraft traffic is the nonmotorized float boater. The four-trip allocation enhances the recreational experience of the nonmotorized float boater (i.e., rafter, inflatable kayaker) during the heaviest use days of summer.

## **Safety Sites of Concern**

Land or lead boat spotters would be required when the view and set down conditions are not met. A motorized boat cannot be a lead boat if it carries passengers. See previous section, All Watercraft Use, for more background on the rationale.

## **Groups/Runs**

Groups/runs would be required for MTB trips. There would be a maximum of six groups per day (i.e., three groups per permit). The objective is to limit encounters with other users. Motorized tour boats in a run would average less than two minutes apart to accomplish this objective.

## **Boat Size**

The maximum length and width dimensions for all MTBs would be 36 feet or less in length and 12.6 feet or less in width. Boats currently being used that exceed these dimensions would be phased out over a period of two seasons after the Record of Decision is signed.

The primary rationale for the boat size standard is that it would enhance the recreational experience of anglers by watercraft and the nonmotorized boat floater. The secondary rationale is that it would reduce the perception that there is a safety problem (Oregon State University 1993).

## **Number of Permits**

Two permits would be issued. Both permits would continue to be issued to the permittee(s).

## **Notice Displays**

A notice display would be required for all MTBs in a group/run. The notice display objective is to inform other users of the numbers and the order of MTBs in a run.

## **Off Plane Procedures**

All MTBs are required to be off plane in Hellgate Canyon, boat ramps, county-designated swim areas, and erosion sensitive areas. The purposes of the off plane procedure are to ensure safe maneuvering in narrow, constricted areas that could be crowded with other watercraft users, to be sensitive to high visitor use areas, and to protect river resources.

## **Annual Daily Schedule**

An annual daily schedule is required. Deviations from the permitted schedule would not be authorized.

The purpose of a fixed annual daily schedule is to inform other users of the approximate times MTBs would be passing certain locations on the river. This knowledge enables the other river users to minimize conflicts with motorized boaters. The MTB permittee(s) would make copies of the annual schedule available to other users and businesses. Schedules would also be available and on display at the primary place(s) of business for the MTB operation.



## Daily Use

Daily use is that time of day when an activity that requires a permit is prescribed to occur. The prescribed daily use times for MTBs in the Hellgate Recreation Area is 9:00 a.m. to 8:30 p.m. May through August 14 and 9:30 a.m. to 8:30 p.m. August 15 through September.

A significant goal of the prescribed daily use times is to enhance angling activities during the early morning prime fishing period. The probability for user conflicts between jet boats and float traffic in these time frames is greatest from May 1 through August 31. Float activity diminishes in September, but the probability for conflicts with anglers increases. Angling activity generally occurs earlier in the day whereas float activity occurs later in the morning.

Early entry time through August would ease congestion at Hog Creek and downstream points during peak floating times. The later entry time in September would reduce conflicts with anglers.

## Special Motorized Boating Events

Most common management actions applicable to other types of motorized boating traffic are not applicable to special motorized boating events, except for the season of use common to all motorized boating (see Table 2-6).

### Allocation/Limits

Special motorized boating events (the Memorial Day Boatnik race including the unlimited class jetboat race, and the Labor Day boat race) would have an allocation that limits the race time to two hour/day. This limit ensures the continuation of a use that encompasses the highest historical usage while establishing a limit to protect river resources and other visitors' recreational experiences. Changes to the allocation could be allowed. Special motorized boating events would be considered year-round.

### River Reach

Special motorized boating events would normally be allocated for the Applegate Reach. For safety reasons, these events require the cessation of other watercraft activities during the events. This prescription allows the continuation of the special motorized boating events in the Hellgate Recreation Area while protecting the continuation of other watercraft activities in the Dunn Reach, especially the popular activity of rafting.

Special motorized boating events could be allowed in the Dunn Reach (May 1 to September 30).

### Number of Permits

Two permits would be issued for special motorized boating events. The two existing permits that would continue are for the Memorial Day Boatnik and Labor Day boat races.

Traditional motorized boating events would be allowed within the Hellgate Recreation Area. Nontraditional events would be allowed. For example, a new event might be a combination Memorial Day Boatnik race including an unlimited class jet boat race. Personal watercraft would not be allowed.

A greater number of permits would be considered for other special motorized boating events. The analysis would require that the permits protect and enhance the outstandingly remarkable values (ORVs) for which the Rogue River was included in the National Wild and Scenic Rivers System.



## **New Specialized Motor Boat Events**

New specialized motor boat events would be considered on a case-by-case basis (see Table 2-6).

## **Nonmotorized Float Boating**

### **Allocation/Limits**

Allocation/limits would not be prescribed now (see Table 2-7). There would be an allocation prescribed in the future if the carrying capacity for nonmotorized float boating is reached (MRSCTU 1994).

The social carrying capacity for floaters is reached when the average high watercraft use for the 4th of July holiday and the weekend days in July and August exceeds the upper limit encounter standard of 500 watercraft per day. The 1991 high watercraft use average in the Dunn Reach was 350 watercraft, which is 70 percent of carrying capacity.

Management actions would also include an educational outreach that would encourage floaters to voluntarily stay off the river during the first three or four hours of daylight during intense fishing periods, especially September through November.

## **Nonmotorized Boat Angling**

### **Allocation/Limits**

Allocation/limits would not be prescribed now (see Table 2-8). There would be an allocation prescribed in the future if the carrying capacity for nonmotorized boat angling was reached for a rural river recreation opportunity spectrum class (see Appendix E) (MRSCTU 1994).

### **Season of Use/River Reach**

Nonmotorized boat angling would be year-round in the Applegate and the Dunn reaches.

## **Boater Fees and Permits and User Fees**

An adequate and stable funding mechanism is essential under a limited entry system. Funding would be used for resource protection, visitor services, facility development, operation, maintenance and trash collection, as well as access acquisition. There is increasing pressure for BLM to obtain a fair return for recreation investments and services provided by public lands. This may in part translate to establishing or increasing recreation and user fees to offset the cost of providing recreation services (see Table 2-9).

### **Commercially-Guided Watercraft**

Boater fees and permits would be required.

There would be an allocation or limit to the number of commercial permits in the future if carrying capacity is reached.

### **Watercraft for Private Use**

Boater fees would not be required. Boater fees would be required if carrying capacity is reached.



Boater permits for private use are not required. There would be no limits to the number of nonmotorized boat angling, nonmotorized float boating, or motorized boating services and activities. Permits would be required if carrying capacity is reached.

## **User Fees**

User fees would not be required.

# **Recreational Opportunities**

## **Camping**

### **Corridor Areas Open to Camping**

The corridor area open to camping on BLM-administered land, unless otherwise identified, is from Hellgate Park to Grave Creek. The corridor area closed to camping on BLM-administered land is the upstream segment of the Hellgate Recreation Area (i.e., near the confluence of the Applegate River with the Rogue River) to Hellgate Park.

### **Primitive Camping Areas**

Primitive camping areas are those sites without improvements, such as toilets, picnic tables, and trash cans. Interpretative information would be available about the sites in media, such as brochures. Three sites would be managed as primitive camping areas (see Table 2-10).

### **Developed Camping Areas**

Developed camping areas would have one or more of the following improvements: parking, toilets, picnic tables, trash cans, fish cleaning stations, or informational signs. Eight sites would be managed as developed camping areas (see Table 2-10).

### **Human Waste Pack Out**

Commercial and private users would be required to pack out human waste at sites without toilets.

### **Campfires**

Campfire use would be subject to all current State of Oregon regulations. Fire pans would be required on all BLM-administered land where fire grates (or equivalent) or developed fire pits are not provided.

### **Day Limits**

The prescribed day limits to camping would be four days per site during the high summer use season of July and August, unless otherwise posted. Four days was identified as a maximum to allow a wide number of people to use a given site while still allowing a group to occupy a site for an entire holiday weekend. The day limits to camping outside the high summer use season would be 14 days per site, unless otherwise posted.

### **Maximum Group Size**

The maximum prescribed group size would be 30 people at any gathering area unless a larger group size is authorized.



## **Trails**

Trails would be designed, constructed, maintained, and managed to have minimum effect on other resource values and to provide for the safety of the visitor.

Brochures and maps would provide trail access information, trail locations, trail use guidelines, and trail descriptions. The trails would be signed at trailheads.

### **Develop New Trails**

Five new trails would be developed (see Table 2-11). New trails are areas where no trails presently exist and new construction would be necessary.

### **Improve and Expand Existing Trails**

Five existing informal trails that presently have no scheduled maintenance would be improved and expanded. Five trails would be reconstructed (see Table 2-11).

### **Off-Highway Vehicle Trails**

The existing Buckhorn Mountain off-highway vehicle (OHV) trail would continue to be open to all forms of one-track transportation with a development and design focus toward motorized trail bikes (its dominant present use). This trail allocation would be governed by the standards for limited OHV use areas as described in the Medford District RMP, except that the design would be a linear trail with a right-of-way designed for trail bikes.

The Buckhorn Mountain Trail would be a combination trail on BLM-administered land within and outside the Hellgate Recreation Area that would tie into the U.S. Forest Service system of trails. This trail system would link the Rogue River to the Illinois River. The U.S. Forest Service trail is open to OHVs and the missing link in the trail system is the portion leading to the Rogue River.

## **Day-Use Areas**

### **Primitive Day-Use Areas**

Primitive day-use areas are those sites without improvements, such as toilets, picnic tables, and trash cans. Interpretative information would be available about the sites in media, such as brochures. Thirteen sites would be managed as primitive day-use areas (see Table 2-12).

### **Developed Day-Use Areas**

Developed day-use areas would have one or more of the following improvements: parking, toilets, picnic tables, trash cans, fish cleaning stations, or informational signs. Sixteen sites would be managed as developed day-use areas (see Table 2-12).

### **Back Country Byways**

The existing Galice-Hellgate National Back Country Byway would be maintained.

### **Watchable Wildlife Sites**

Three watchable wildlife sites within the Hellgate Recreation Area would be maintained: Whitehorse (i.e., Applegate Landing), Hog Creek Landing, and Hellgate Overlook (i.e., Hellgate Canyon Viewpoint). One new watchable wildlife site would be added at Flanagan Slough.



## **Limited Off-Highway Vehicle Use Areas**

Five areas would be allocated as limited off-highway vehicle (OHV) use (See Table 2-12.) The purposes of the limited OHV use areas would be to provide site access to facilitate simple passage for anglers to fishing areas and the opportunity for visitors to engage in primitive vehicle camping below Hellgate Canyon.

Lands within the Hellgate Recreation Area are not allocated as open to OHV use. All lands not allocated as limited are closed to OHV use.

## **Prohibition-of-Firearm-Discharge Areas**

The entire Hellgate Recreation Area is designated a prohibition-of-firearm discharge area during the high summer visitor use period from June 1 through September 15. All permitted hunting activities are allowed.

Discharge of a firearm or any other implement capable of taking human life, causing injury, or damaging property is prohibited at any time within 150 yards of a residence, building, developed or undeveloped recreations site, occupied area, or at any time across or on any public road, or across or on any trail or body of water whereby any person or property is exposed to injury or damages as a result of such discharge.

## **Public Access**

There are presently 12 boat launch and landing sites in the Hellgate Recreation Area. These sites are: Whitehorse, Griffin, Ferry, Robertson Bridge, Hog Creek, Indian Mary, Ennis, Galice, Rand, Almeda, Argo, and Grave Creek. These areas provide optimal opportunity for boat access; however, overcrowding and rude behavior are sometimes concerns during periods of high use.

## **Maintain Existing Boat Ramps**

The Hog Creek boat ramp is on land administered by Josephine County. It would be maintained by Josephine County, the Oregon State Marine Board, and the BLM.

## **Improved Boat Ramps**

Five boat ramps would be improved (see Table 2-13). Two obsolete boat ramps would be rehabilitated and a new concrete boat ramp would be constructed at Griffin.

## **New Boat Ramps**

New boat ramps would not be constructed.

## **Maintain Fishing Access Sites**

Two fishing access sites would be maintained (see Table 2-13).

## **New Fishing Access Sites**

Two new fishing access sites would be developed (see Table 2-13).

## **Vehicle Access Regulated**

Vehicle access and parking would not be regulated, and day-use permits would not be required for vehicle access or parking.



## **Visitor Services**

The Rand VC would continue to be maintained. A new VC would be constructed in Rand. The Rand and River program staff would provide customer and administrative services out of the new VC. See Table 2-14.

# **Alternatives Considered but Eliminated From Detailed Study**

Significant information was received from interested groups and individuals, which influenced the development of the range of alternatives. Four groups submitted alternatives they recommended for analysis: Oregon Guides and Packers, Oregon Natural Resources Council, Shan Creek/Galice Citizen Advisory Committee, and Trout Unlimited. The following summarizes the alternatives considered but eliminated from detailed study, including the rationale for elimination.

The following are all of the alternative themes considered, but eliminated from further study, including the rationale for elimination.

## **Oregon Guides and Packers**

### **Summary of Alternative Elements**

This alternative would require permits and fees for commercial use only. There would be no limits for commercial use, except for motorized tour boats (MTBs). Private use would not require a permit. The interim MTB permit stipulations (part of Alternative B) would remain in effect and become permanent operating guidelines modified only with respect to MTB size.

Under this alternative, the number and type of visitor services and recreational facilities would in general remain consistent with the level and development in 1993. Current management would allow for the development of up to two additional day-use boat launch areas. Competitive events would continue at the present level.

This alternative would require commercial permittees to be limited to those outfitters permitted in 1993 and show historical use during either the 1991, 1992, or, 1993 seasons. Permit transfers by commercial outfitters would be allowed in the future governed by current outfitter permit regulations.

Improvements would be made to the Argo boat landing, including an improved access road; the Grave Creek boat landing, including a new cement ramp; to the Hog Creek boat landing, including a larger boat ramp area. A new boat launch area would be constructed at Jumpoff Joe Creek.

This alternative would establish a system of unobtrusive signs for boat landings to assist users in recognizing takeout points, as well as a user information program to increase the knowledge of users and to reduce conflicts among users.

### **BLM Rationale for Elimination of Detailed Consideration**

This alternative was eliminated from detailed study because most of the alternative elements are a combination of themes or resulting effects that are similar to Alternatives A through E.



For example, Alternatives B, C, E, and the Preferred Alternative do not require permits or fees for private use. Alternatives B, C, and E do not limit commercial use, except in Alternatives C and E if carrying capacities are reached. The MTB service is limited to some degree in all alternatives with some form of the interim stipulations applicable for all alternatives, except Alternative A.

The number and type of visitor services and recreational facilities would in general remain close to the 1993 level in Alternatives A and B. Additional boat launch areas are identified for analysis in Alternative D.

This alternative would limit commercial permittees in Alternative A at the outset and in Alternatives C and E if carrying capacities are reached. Under all alternatives, permit transfers by commercial outfitters would be allowed in the future.

Alternatives C and D include improving the Agro, Grave Creek, and Hog Creek boat ramps; Alternative E includes improving the Argo and Grave Creek boat ramps.

All alternatives consider different levels of education, which includes signs and user information packages.

## **Oregon Natural Resources Council**

### **Summary of Alternative Elements**

The Oregon Natural Resources Council's (ONRC) alternative commented that BLM was violating an element of the National Environmental Policy Act (NEPA), which required the BLM to analyze a reasonable range of alternatives. The ONRC felt that motorized tour boats (MTBs) substantially interfered with the recreational and scenic values which caused the Rogue River to be designated part of the National Wild and Scenic River System. The ONRC's position was that continuing to allow MTBs on the river violated 16 U.S.C. section 1281.

The central theme of this alternative is to eliminate MTBs from the planning area. There was no recommendation concerning other components of this alternative.

### **BLM Rationale for Elimination of Detailed Consideration**

The BLM is sensitive to conflicts between motorized and nonmotorized boating. The range of Alternatives A through E all have limits to MTB use in the Hellgate Recreation Area. Motorized boating is also part of the "recreational outstandingly remarkable value (ORV)." For example, the annual visitor use split among the three major watercraft users in the Hellgate Recreation Area at the time of the passage of the W&SRA was approximately 2,000 anglers, 1,000 floaters, and 9,000 motorized tour boaters (Austermuehle, Walker and Littlefield 1995).

The entire elimination of visitor use by MTB and the probable denial of access to a substantial, diversified, and statistically significant percentage of the total visitor use would be the equivalent of denying or diminishing the "recreation" based ORV.

The alternatives that propose "low" MTB visitor use, Alternatives A and C, use maximum daily MTB trips for the year 1985 (maximum of 12 MTB round trips per day during season of use) because it closely reflected a time before the general controversy over river use allocations began. The objective in establishing the range was to manage the Hellgate Recreation Area, a recreational section, by giving primary emphasis to protecting the values that made it outstandingly remarkable while providing river-related recreational opportunities in a developed setting.



# Shan Creek/Galice Citizen Advisory Committee

The Shan Creek/Galice Citizen Advisory Committee (SC/GCAC) recommended an array of alternatives to be analyzed. They feel there is growing conflict between motorized and nonmotorized recreationists. The committee feels that the development of alternatives that reduce user conflicts must be one of the main purposes of the resource area management plan (RAMP) if it is to follow the intent of the W&SRs Act.

## Summary of Alternative Elements

The SC/GCAC feels the alternatives should provide the use of slower, quieter forms of tour boats. Large rafts with sweeps, which only utilize small hold-back motors, should be encouraged. They feel the alternatives should be developed that reduce the numbers and/or routes of MTBs. In addition, they feel that fast, motorized, thrill rides on the river need to be reduced in order to preserve the opportunities for peaceful recreation and enjoyment in the natural environment. Opportunities should be given for activities that do not involve extensive use of motors. The committee feels there is little problem with nonmotorized boats encountering other nonmotorized boats or bank recreationists.

The SC/GCAC provided an array of alternatives for consideration by BLM. They used MTB trips per day as the major variable for five alternatives. MTB trips were selected because they feel these boats are generally the fastest and largest type of watercraft on the river, and therefore, were causing some of the greatest user conflicts.

Alternative A reflects the number of MTB trips in 1969, the year after the W&SR's Act was passed and the year that the original master plan was developed by BLM for that portion of the W&SR under its administration. The SC/GCAC feels the maximum number of daily round trips for MTBs should be set at 2 if the historical number of trips in 1969 could not be established.

Alternative B uses the number of trips in 1985. The advisory committee considers 1985 to be the year user conflicts began. The committee identified the maximum number of daily trips to be nine.

Under Alternative C, the number of trips is roughly equal to 150 percent of the year 1985 when conflicts began to appear ( $9 \times 1.5 = 13.5$  rounded to 14 trips).

Alternative D sets the number of MTB round trips to equal the number of trips in 1993 (19 trips), continues the BLM's interim permit stipulations and includes the elimination of the two largest MTBs.

Alternative E establishes a total number of 28 short round trips, roughly 150 percent of the number of trips in Alternative D ( $19 \times 1.5 = 28.5$  rounded to 28), but the trips occur in restricted routes, which are shortened and separated. No route would have more than 14 trips in a particular and separate route. There could be round trips from Grants Pass to Griffin Park and back and a separate round trip route from Robertson Bridge to Hellgate and back, but no round trips through Brushy Chutes.

In addition to the maximum number of daily MTB trips by alternative, the SC/GCAC feels: jet skis should not be allowed, there should be specific wave height requirements for MTBs in certain situations and no wake zones in certain areas of soil sensitivity, consideration should be given to wildlife sensitive areas, motorized boats should not conduct thrill power maneuvers, MTBs should not be allowed in the Hellgate Recreation Area before 10:30 a.m. and after 7:00 p.m., the entire recreation area should be considered sound sensitive, and the expansion/addition of boat ramps at Robertson Bridge and Hog Creek should be analyzed.



The SC/GCAC also thinks motorized boat angling should be restricted, drift boat motors prohibited, patrolling increased, no wake and low wake areas should be established, and the size of commercial angling boats should be restricted.

## BLM Rationale for Elimination of Detailed Consideration

Its specific organizational recommendations were eliminated from detailed study because most of the alternative elements are similar to those of Alternatives A through E. Two major elements recommended by SC/GCAC were considered: 1) use of 1969 as base year to determine maximum number of daily MTB round trips, and 2) the design of an alternative that included a maximum of 28 short daily round trips of which not more than 14 could be on the same segment of river and no round trips through Brushy Chutes.

The SC/GCAC and BLM are in agreement concerning the presence of conflicts between motorized and nonmotorized boating. Alternative A reflects a level of boating consistent with the time before the general controversy over use allocations began. Alternatives C and E establishes a season of use (May 1 through September 15) for all motorized traffic. This season of use for motorized boating restricts most motorized angling and eliminates drift boat motors. Alternatives C and E also eliminate commercial motorized traffic in the Dunn Reach (the water segment of the Hellgate Recreation Area where 90 percent of the white water floating occurs) during weekends and holidays in July and August. Thrill maneuvers are allowed in Alternatives A and B, prohibited in Alternative C, and allowed in certain areas in Alternatives D and E. Commercial boat angling is limited to a maximum of two round trips per day per permit during the season of use from May 1 through September 15 in Alternatives C and E.

The BLM does not consider the Hellgate Recreation Area to be explicitly sound sensitive. However, Alternatives C and E include a six-mile sound management area that focuses on the rights and interests of private property owners. The MTB hours of operation in the Hellgate Recreation Area range from Alternative A, which has no restrictions to Alternative C, which includes limiting MTBs from entering the Hellgate Recreation Area before 10:30 a.m. and remaining after 7:00 p.m. All alternatives, except for Alternative A, would have a comprehensive set of stipulations governing the operation of the MTBs. A range of options is considered concerning the size of the largest MTBs. Alternative A allows one large MTB, Alternative B allows two large MTBs, Alternatives C and E allow no large MTBs, and Alternative D allows two large MTBs and increases the threshold of the smaller MTBs from 36'x12' to 39'x12'.

The BLM assumptions concerning maximum number of round trips per day for MTBs are almost a perfect match to SC/GCAC's recommendations. The exception is SC/GCAC's recommendations for an alternative that reflected the maximum number of daily MTB trips which occurred in 1969 and the design of their Alternative E (28 round trips with the trips occurring in restricted routes, which are shortened and separate).

The maximum daily MTB trips were recomputed using SC/GCAC's assumptions and an explanation for the recomputation.

### SC/GCAC Recommended Trips for MTBs

Alternative A - maximum of 2 round trips  
Alternative B - maximum of 9 round trips  
Alternative C - maximum of 14 round trips  
Alternative D - maximum of 19 round trips  
Alternative E - maximum of 28 round trips

### BLM Computation Based on SC/GCAC Assumptions

- maximum of 6-8 round trips  
- maximum of 12 round trips  
- maximum of 18 round trips  
- maximum of 19 round trips  
- maximum of 28 round trips

The SC/GCAC's Alternative A (i.e., number of MTB trips in 1969 equaled 6 to 8) was considered and eliminated from further study. The background to this decision identified there were two



MTB operators in 1969 whose combined fleets totaled four MTBs. Their combined maximum daily round trips ranged from 6 to 8 (Walker and Austermuehle 1994). It is noted that visitor use for the three major types of boating use (boat angling, floating, and motorized) had all increased significantly from the time the National Wild and Scenic Rivers Act was passed (see Chapter 3, Visitor Use). For example, there are twice as many boat anglers, ten times as many floaters, and seven times as many visitors by MTBs (see Austermuehle, Walker and Littlefield 1995). The BLM identified 1985 as its "low" visitor use alternative (BLM's Alternative A) rather than 1969, the year after the Wild and Scenic Rivers Act was passed. The BLM selected 1985 to represent the low visitor use alternative because it closely reflected a time before the general controversy over use allocation began. The objective was not to have an alternative that reflected visitor use at the time of passage of the Act. This objective would significantly lower the recreational opportunities for boat angling, floating, and motorized tour boating. The objective is to manage the planning area by giving primary emphasis to protecting the values that made it outstandingly remarkable while providing river-related recreational opportunities in a developed setting.

The BLM and the SC/GCAC are in agreement concerning the year 1985 and what it generally represented in terms of visitor use conflicts. There is a disagreement, however, in the number of round trips; SC/GCAC identified the maximum number of round trips by MTBs as 9 and BLM's information indicated that the maximum number of round trips as 12 (Walker and Austermuehle 1994).

SC/GCAC's Alternative B (12 round trips) fits BLM's Alternatives A and C. SC/GCAC's Alternatives C and D (18 and 19 round trips) are very close to BLM's Alternatives B and E (19 and 19 round trips).

SC/GCAC's Alternative E (a maximum of 28 round trips) is slightly higher, but close to BLM's Alternative D (26 trips). However, SC/GCAC's Alternative E restricts routes that can be used by MTBs. These routes are shorter and separate when compared to those considered in BLM's Alternatives A through E, which are longer and overlap. SC/GCAC envisions that no route would have more than 14 trips. For example, there could be round trips from Grants Pass to Griffin Park and back and another separate round trip route from Robertson Bridge to Hellgate and back, but no round trips through Brushy Chutes. The idea of shorter and separate routes and no MTB boat traffic through the Brushy Chutes area was considered but eliminated from further analysis because of logistical questions (e.g., traffic congestion at Robertson Bridge Boat Ramp and connecting roads, lower river route too short, provisions for urban services) and a BLM focus through its scenic easement program to encourage MTB support systems to be provided outside the Hellgate Recreation Area. This would decrease the potential for future conflicts between urban support systems established for MTBs in the rural settings of the Hellgate Recreation Area with other visitor-use activities. Alternatives A and C provide a similar level of MTB daily use (12 trips) as SC/GCAC's Alternative E (maximum of 14 trips in any segment).

## **Trout Unlimited**

### **Summary of Alternative Elements**

The Middle Rogue Steelhead Chapter of Trout Unlimited's is primarily concerned with the conservation and preservation of trout, salmon, and steelhead as game fish. Trout Unlimited recommends an alternative that redesigns Alternative C. The Chapter supports Alternative C if eight changes are included in its design and if the Alaska Jet Boat Study indicates no adverse effects from jet boats to spawning areas. The Chapter recommends an elimination of all power boats should the Alaska study confirm its suspicions that jet boats are detrimental to spawning areas.

Trout Unlimited is also concerned about growing safety problems between motorized and nonmotorized traffic.



## **Summary of Recommended Changes to Alternative C**

All changes apply to MTB operations in the Hellgate Recreation Area. The eight changes to Alternative C include:

- Maximum of 10 round trips per day.
- Remove boats longer than 36' by 1995.
- Maximum boat length of 30' for new boats.
- Season of use from May 1 through Labor Day weekend.
- Annual daily schedule required; active BLM monitoring for compliance.
- Boats not allowed after 7:00 p.m.
- Boats off plane at swimming areas.
- Boat operations to cease at an established low water flow.

## **BLM Rationale for Elimination of Detailed Consideration**

Almost all of the elements of Trout Unlimited's recommended alternative are included in the identified range of Alternatives A-E. Its specific organizational recommendations were eliminated from detailed study because most of the alternative elements are similar to elements of Alternatives A-E.

All recommended changes to Alternative C by Trout Unlimited were considered by the BLM. All elements are included in the range of alternatives; some of the specific thresholds or standards were not used and were eliminated from detailed consideration. The rationale for not including specific thresholds or standards as alternative elements are discussed in detail.

The primary management emphasis is to protect and enhance the ORVs while maintaining the recreation experiences available at the time the Rogue River was designated a wild and scenic river. The management goal is to allow for continuation of compatible uses, while providing a wide range of public outdoor recreational opportunities and minimizing conflicts.

The Middle Rogue Steelhead Chapter of Trout Unlimited's primary concern is the conservation and preservation of trout, salmon, and steelhead as game fish. Alternatives C and E establish a season of use (May 1 through September 15) for all motorized traffic because of a concern about impacts from motorized traffic on spawning areas. This season of use would only restrict 2.1 percent of the boat angling experience from intrusions of motorized traffic. Alternatives C, D, and E recognize the sensitivity of fall chinook spawning areas.

Alternatives C and E also eliminate commercial motorized traffic in the Dunn Reach (the water segment of the Hellgate Recreation Area where 90 percent of the white water floating occurs) during weekends and holidays in July and August. The restriction is primarily because of social conflicts and safety concerns between floaters and motorized boaters, and it would also protect the angling experience during those busy weekends.



# Chapter 2

## Tables, Map and Figures

Table 2.1. Summary and Comparison of All Nations - All Watersheds Use (Commercial and Private)

All Nations	Alternative A Public Watersheds Local Watersheds	Alternative B Public Watersheds Local Watersheds	Alternative C Public Watersheds Local Watersheds	Alternative D Public Watersheds Local Watersheds	Alternative E Public Watersheds Local Watersheds
Forest Management	Forest Management Forest Management Forest Management	Forest Management Forest Management Forest Management	Forest Management Forest Management Forest Management	Forest Management Forest Management Forest Management	Forest Management Forest Management Forest Management
Logging	Logging Logging Logging	Logging Logging Logging	Logging Logging Logging	Logging Logging Logging	Logging Logging Logging
Wildlife Management	Wildlife Management Wildlife Management Wildlife Management	Wildlife Management Wildlife Management Wildlife Management	Wildlife Management Wildlife Management Wildlife Management	Wildlife Management Wildlife Management Wildlife Management	Wildlife Management Wildlife Management Wildlife Management
Recreation	Recreation Recreation Recreation	Recreation Recreation Recreation	Recreation Recreation Recreation	Recreation Recreation Recreation	Recreation Recreation Recreation
Water Quality	Water Quality Water Quality Water Quality	Water Quality Water Quality Water Quality	Water Quality Water Quality Water Quality	Water Quality Water Quality Water Quality	Water Quality Water Quality Water Quality
Land Use	Land Use Land Use Land Use	Land Use Land Use Land Use	Land Use Land Use Land Use	Land Use Land Use Land Use	Land Use Land Use Land Use
Infrastructure	Infrastructure Infrastructure Infrastructure	Infrastructure Infrastructure Infrastructure	Infrastructure Infrastructure Infrastructure	Infrastructure Infrastructure Infrastructure	Infrastructure Infrastructure Infrastructure
Transportation	Transportation Transportation Transportation	Transportation Transportation Transportation	Transportation Transportation Transportation	Transportation Transportation Transportation	Transportation Transportation Transportation
Energy	Energy Energy Energy	Energy Energy Energy	Energy Energy Energy	Energy Energy Energy	Energy Energy Energy
Industry	Industry Industry Industry	Industry Industry Industry	Industry Industry Industry	Industry Industry Industry	Industry Industry Industry
Urban Development	Urban Development Urban Development Urban Development	Urban Development Urban Development Urban Development	Urban Development Urban Development Urban Development	Urban Development Urban Development Urban Development	Urban Development Urban Development Urban Development
Public Services	Public Services Public Services Public Services	Public Services Public Services Public Services	Public Services Public Services Public Services	Public Services Public Services Public Services	Public Services Public Services Public Services
Health	Health Health Health	Health Health Health	Health Health Health	Health Health Health	Health Health Health
Education	Education Education Education	Education Education Education	Education Education Education	Education Education Education	Education Education Education
Environment	Environment Environment Environment	Environment Environment Environment	Environment Environment Environment	Environment Environment Environment	Environment Environment Environment
Other	Other Other Other	Other Other Other	Other Other Other	Other Other Other	Other Other Other



# Tables, Maps and Figures

## Guidelines for Preparation of Tables and Figures

The first rule is to keep the tables and figures as simple as possible. Avoid unnecessary detail and complexity. Use clear, concise language to describe the data and the results of the analysis.

Second, make sure that the tables and figures are easy to read. Use a clear, legible font and a consistent layout. Avoid clutter and unnecessary lines. Use appropriate units and scales for the data.

Third, use appropriate statistical tests and methods to analyze the data. Make sure that the results are presented in a clear and concise manner. Use appropriate units and scales for the data.

Fourth, use appropriate statistical tests and methods to analyze the data. Make sure that the results are presented in a clear and concise manner. Use appropriate units and scales for the data.

Fifth, use appropriate statistical tests and methods to analyze the data. Make sure that the results are presented in a clear and concise manner. Use appropriate units and scales for the data.



**Table 2-1. Summary and Comparison of Alternatives - All Watercraft Use (Commercial and Private)**

<b>All Watercraft</b>	<b>Alternative A Fewer Watercraft &amp; Less Visitor Use</b>	<b>Alternative B Current Management/ No Action</b>	<b>Alternative C Angler &amp; Floater Enhancement/More Watercraft &amp; More Visitor Use</b>	<b>Alternative D Maximum Watercraft and Visitor Use</b>	<b>Alternative E Preferred Alternative</b>
<b>Sound Management Areas</b>	<ul style="list-style-type: none"> <li>• No areas designated.</li> </ul>	<ul style="list-style-type: none"> <li>• No areas designated.</li> </ul> <ol style="list-style-type: none"> <li>1. Minimize sound intrusions for residents through education.</li> </ol>	<ul style="list-style-type: none"> <li>• One 6-mile sound management area designated from Finley Bend to Jumpoff Joe Creek:</li> </ul> <ol style="list-style-type: none"> <li>1. Minimize sound intrusions for residents through education.</li> <li>2. No thrill power maneuvers.</li> </ol>	<ul style="list-style-type: none"> <li>• No areas designated.</li> </ul> <ol style="list-style-type: none"> <li>1. Minimize sound intrusions for residents through education.</li> </ol>	<ul style="list-style-type: none"> <li>• One 4-mile sound management area designated from Flanagan Slough to Jumpoff Joe Creek.</li> </ul> <ol style="list-style-type: none"> <li>1. Minimize sound intrusions for residents through education.</li> <li>2. No thrill power maneuvers before 10:00 a.m. or after 5:00 p.m.</li> </ol>
<b>Angling Enhancement Zones</b>	<ul style="list-style-type: none"> <li>• No areas designated.</li> </ul>	<ul style="list-style-type: none"> <li>• No areas designated.</li> </ul>	<ul style="list-style-type: none"> <li>• Angling Enhancement areas designated: confluence of Applegate with Rogue River, Whitehorse Riffle, Finley Bend, Brushy Chutes, Ferry Hole, Hellgate Canyon, Taylor Creek Gorge, and Morrison's Lodge Hole.</li> </ul>	<ul style="list-style-type: none"> <li>• Angling enhancement areas would be designated to facilitate sharing of fishing holes.</li> </ul>	<ul style="list-style-type: none"> <li>• Designate angling enhancement areas: confluence of Applegate with Rogue River, Whitehorse Riffle, Finley Bend, Brushy Chutes, Ferry Hole, Hellgate Canyon, Taylor Creek Gorge, and Morrison's Lodge Hole.</li> </ul> <ol style="list-style-type: none"> <li>1. To facilitate sharing of fishing holes.</li> <li>2. No anchoring.</li> </ol>



**Table 2-1. Summary and Comparison of Alternatives - All Watercraft Use (Commercial and Private)**

<b>All Watercraft</b>	<b>Alternative A Fewer Watercraft &amp; Less Visitor Use</b>	<b>Alternative B Current Management/ No Action</b>	<b>Alternative C Angler &amp; Floater Enhancement/More Watercraft &amp; More Visitor Use</b>	<b>Alternative D Maximum Watercraft and Visitor Use</b>	<b>Alternative E Preferred Alternative</b>
<b>Fall Chinook Spawning/Sensitive Areas</b>	<ul style="list-style-type: none"> <li>• No areas designated.</li> </ul>	<ul style="list-style-type: none"> <li>• No areas designated.</li> </ul>	<ul style="list-style-type: none"> <li>• Protect all spawning areas:</li> </ul> <ol style="list-style-type: none"> <li>1. Avoid major spawning areas or pass through.</li> <li>2. No motorized use in thirteen spawning areas: Applegate Riffle, Whitehorse Riffle, Matson Riffle, Panther Chutes, Wharton Riffle, Brushy Chutes, Lower Banfield Chute, Robertson's Riffle, High Banks Riffle, Peach Riffle, Pickett Riffle, Two-Bit Riffle, Jumpoff Joe Riffle and Weatherby Riffle.</li> </ol>	<ul style="list-style-type: none"> <li>• Protect four major spawning areas:</li> </ul> <ol style="list-style-type: none"> <li>1. Avoid major spawning areas or pass through.</li> <li>2. No motorized use in four major spawning areas: Whitehorse Riffle, Matson Riffle, Panther Chutes, and Wharton Riffle.</li> </ol>	<ul style="list-style-type: none"> <li>• Protect four major spawning areas:</li> </ul> <ol style="list-style-type: none"> <li>1. Avoid major spawning areas or pass through.</li> <li>2. No motorized use in four major spawning areas: Whitehorse Riffle, Matson Riffle, Panther Chutes, and Wharton Riffle.</li> </ol>
<b>Safety Sites of Concern</b>	<ul style="list-style-type: none"> <li>• No areas designated.</li> </ul>	<ul style="list-style-type: none"> <li>• No areas designated.</li> </ul>	<ul style="list-style-type: none"> <li>• Sites of concern would be designated:</li> </ul> <ol style="list-style-type: none"> <li>1. Facilitate awareness.</li> <li>2. Encourage use of radios.</li> </ol>	<ul style="list-style-type: none"> <li>• Sites of concern would be designated:</li> </ul> <ol style="list-style-type: none"> <li>1. Facilitate awareness.</li> <li>2. Encourage use of radios.</li> </ol>	<ul style="list-style-type: none"> <li>• Sites of concern would be designated:</li> </ul> <ol style="list-style-type: none"> <li>1. Facilitate awareness.</li> <li>2. Encourage use of radios.</li> </ol>



**Table 2-2. Summary and Comparison of Alternatives - All Motorized Boating (Commercial and Private)**

<b>All Motorized Boating</b>	<b>Alternative A</b> Fewer Watercraft & Less Visitor Use	<b>Alternative B</b> Current Management/ No Action	<b>Alternative C</b> Angler & Floater Enhancement/More Watercraft & Visitor Use	<b>Alternative D</b> Maximum Watercraft & Visitor Use	<b>Alternative E</b> Preferred Alternative
<b>Season of Use</b>	<ul style="list-style-type: none"> <li>• Year-round for all motorized boating, except MTBs 5/1 - 9/30.</li> </ul>	<ul style="list-style-type: none"> <li>• Year-round for all motorized boating, except MTBs 5/1 - 9/30.</li> </ul>	<ul style="list-style-type: none"> <li>• 5/1 - 9/15 for all motorized boating in Applegate Reach; extension from 9/16 - 9/30, providing monitoring indicates no spawning.</li> <li>• Year-round for all motorized boating in Dunn Reach, except commercial MTBs 5/1 - 9/15; extension from 9/16 - 9/30, providing monitoring indicates no spawning.</li> </ul>	<ul style="list-style-type: none"> <li>• Year-round for all motorized boating, except MTBs 4/1 - 10/31.</li> </ul>	<ul style="list-style-type: none"> <li>• Year-round for all motorized boating in Applegate and Dunn reaches, except commercial MTBs 5/1 - 9/15; extension from 9/16 - 9/30, providing monitoring indicates no spawning in major areas.</li> </ul>
<b>Erosion Sensitive Areas</b> (Bed and bank)	<ul style="list-style-type: none"> <li>• No areas designated.</li> </ul>	<ul style="list-style-type: none"> <li>• No areas designated.</li> </ul>	<ul style="list-style-type: none"> <li>• Erosion sensitive areas designated; interim no wake zones in the following areas: 1,000 Rocks, Wharton/Flanagan, Little Pickett and O.K. Corral.</li> <li>Monitoring (see Preferred Alternative).</li> </ul>	<ul style="list-style-type: none"> <li>Erosion sensitive areas designated; interim no wake zones in the following areas: Little Pickett and O.K. Corral.</li> <li>Monitoring (see Preferred Alternative).</li> </ul>	<ul style="list-style-type: none"> <li>Erosion sensitive areas designated; interim no wake zones in the following areas: 1,000 Rocks, Wharton/Flanagan, Little Pickett and O.K. Corral.</li> </ul>



**Table 2-2. Summary and Comparison of Alternatives - All Motorized Boating (Commercial and Private)**

<b>All Motorized Boating</b>	<b>Alternative A</b> Fewer Watercraft & Less Visitor Use	<b>Alternative B</b> Current Management/ No Action	<b>Alternative C</b> Angler & Floater Enhancement/More Watercraft & Visitor Use	<b>Alternative D</b> Maximum Watercraft & Visitor Use	<b>Alternative E</b> Preferred Alternative
<b>Season of Use</b>	<ul style="list-style-type: none"> <li>• Year-round for all motorized boating, except MTBs 5/1 - 9/30.</li> </ul>	<ul style="list-style-type: none"> <li>• Year-round for all motorized boating, except MTBs 5/1 - 9/30.</li> </ul>	<ul style="list-style-type: none"> <li>• 5/1 - 9/15 for all motorized boating in Applegate Reach; extension from 9/16 - 9/30, providing monitoring indicates no spawning.</li> <li>• Year-round for all motorized boating in Dunn Reach, except commercial MTBs 5/1 - 9/15; extension from 9/16 - 9/30, providing monitoring indicates no spawning.</li> </ul>	<ul style="list-style-type: none"> <li>• Year-round for all motorized boating, except MTBs 4/1 - 10/31.</li> </ul>	<ul style="list-style-type: none"> <li>• Year-round for all motorized boating in Applegate and Dunn reaches, except commercial MTBs 5/1 - 9/15; extension from 9/16 - 9/30, providing monitoring indicates no spawning in major areas.</li> </ul>
<b>Erosion Sensitive Areas</b> (Bed and bank)	<ul style="list-style-type: none"> <li>• No areas designated.</li> </ul>	<ul style="list-style-type: none"> <li>• No areas designated.</li> </ul>	<ul style="list-style-type: none"> <li>• Erosion sensitive areas designated; interim no wake zones in the following areas: 1,000 Rocks, Wharton/Flanagan, Little Pickett and O.K. Corral.</li> <li>Monitoring (see Preferred Alternative).</li> </ul>	<ul style="list-style-type: none"> <li>Erosion sensitive areas designated; interim no wake zones in the following areas: Little Pickett and O.K. Corral.</li> <li>Monitoring (see Preferred Alternative).</li> </ul>	<ul style="list-style-type: none"> <li>Erosion sensitive areas designated; interim no wake zones in the following areas: 1,000 Rocks, Wharton/Flanagan, Little Pickett and O.K. Corral.</li> </ul>



**Table 2-2. Summary and Comparison of Alternatives - All Motorized Boating (Commercial and Private)**

<b>All Motorized Boating</b>	<b>Alternative A</b> Fewer Watercraft & Less Visitor Use	<b>Alternative B</b> Current Management/ No Action	<b>Alternative C</b> Angler & Floater Enhancement/More Watercraft & Visitor Use	<b>Alternative D</b> Maximum Watercraft & Visitor Use	<b>Alternative E</b> Preferred Alternative
<b>Boat Speed</b>					
(Wake)	<ul style="list-style-type: none"> <li>• No wake zones at boat ramps and county-designated swim areas.</li> </ul>	<ul style="list-style-type: none"> <li>• No wake zones at boat ramps and county-designated swim areas.</li> </ul>	<ul style="list-style-type: none"> <li>• No wake zones at boat ramps, county-designated swim areas, and erosion sensitive areas.</li> <li>• No wake zones in five areas of angler concentrations: Applegate Riffle, 1000 Rocks, Finley Bend, Brushy Chutes, and Ferry Hole.</li> </ul>	<ul style="list-style-type: none"> <li>• No wake zones at boat ramps, county-designated swim areas, and erosion sensitive areas.</li> <li>• No wake zones in five areas of angler concentrations: Applegate Riffle, 1000 Rocks, Finley Bend, Brushy Chutes, and Ferry Hole.</li> </ul>	<ul style="list-style-type: none"> <li>• No wake zones at boat ramps, county-designated swim areas, and erosion sensitive areas.</li> </ul>
<b>Two-Way Radio Communication</b>	<ul style="list-style-type: none"> <li>• No radio requirements.</li> </ul>	<ul style="list-style-type: none"> <li>• MTBs required to have two-way radios.</li> <li>• Radios encouraged, but not required for other motorized watercraft.</li> </ul>	<ul style="list-style-type: none"> <li>• Two-way radios required for all motorized watercraft.</li> <li>• BLM and MTB have mutual use of MTB licensed radio channel.</li> <li>• Radios encouraged, but not required for other motorized watercraft.</li> </ul>	<ul style="list-style-type: none"> <li>• Two-way radios required for all motorized watercraft.</li> </ul>	<ul style="list-style-type: none"> <li>• MTBs required to have two-way radios.</li> <li>• BLM and MTB operators have mutual use of MTB licensed radio channel.</li> <li>• Radios encouraged, but not required for other motorized watercraft.</li> </ul>



**Table 2-3. Summary and Comparison of Alternatives - Private Motorized Boating**

<b>Private Motorized Boating</b>	<b>Alternative A Fewer Watercraft &amp; Less Visitor Use</b>	<b>Alternative B Current Management/No Action</b>	<b>Alternative C Angler &amp; Floater Enhancement/More Watercraft &amp; Visitor Use</b>	<b>Alternative D Maximum Watercraft &amp; Visitor Use</b>	<b>Alternative E Preferred Alternative</b>
<b>Allocation/Limits</b>	<ul style="list-style-type: none"> <li>• Limits: equals 1985 visitor use.</li> </ul>	<ul style="list-style-type: none"> <li>• No limits.</li> </ul>	<ul style="list-style-type: none"> <li>• No limits now.</li> <li>• Limits in the future if carrying capacity reached.</li> </ul>	<ul style="list-style-type: none"> <li>• No limits.</li> </ul>	<ul style="list-style-type: none"> <li>• No limits now.</li> <li>• Limits in the future if carrying capacity reached.</li> </ul>
<b>River Reach</b>	<ul style="list-style-type: none"> <li>• Allowed in Applegate and Dunn reaches.</li> </ul>	<ul style="list-style-type: none"> <li>• Allowed in Applegate and Dunn reaches.</li> </ul>	<ul style="list-style-type: none"> <li>• Allowed in Applegate Reach May 1-September 15.</li> <li>• Allowed year-round in Dunn Reach, but on rotational basis (4 days on, 10 days off during July and August).</li> </ul>	<ul style="list-style-type: none"> <li>• Allowed in Applegate and Dunn reaches.</li> </ul>	<ul style="list-style-type: none"> <li>• Allowed year-round in Applegate Reach.</li> <li>• Allowed year-round in Dunn Reach, except afternoons (p.m.) of 4<sup>th</sup> of July holiday and weekend days in both July and August.</li> </ul>



**Table 2-4. Summary and Comparison of Alternatives - Commercial Motorized Boat Angling**

<b>Commercial Motorized Fishing Boats (MFB)</b>	<b>Alternative A Fewer Watercraft &amp; Less Visitor Use</b>	<b>Alternative B Current Management/No Action</b>	<b>Alternative C Angler &amp; Floater Enhancement/More Watercraft &amp; Visitor Use</b>	<b>Alternative D Maximum Watercraft &amp; Visitor Use</b>	<b>Alternative E Preferred Alternative</b>
<b>Season of Use</b>	May 1 through September 15; extension from 9/16 - 9/30, providing monitoring indicates no spawning in major areas.	Year-round.	May 1 through September 15; extension from 9/16 - 9/30, providing monitoring indicates no spawning in major areas.	May 1 through September 15; extension from 9/16 - 9/30, providing monitoring indicates no spawning in major areas.	May 1 through September 15; extension from 9/16 - 9/30, providing monitoring indicates no spawning in major areas.
<b>Allocation/limits (Trips per day)</b>	<ul style="list-style-type: none"> <li>Limits: 2 trips per day per permit during season of use.</li> </ul>	<ul style="list-style-type: none"> <li>Limits historical use:               <ul style="list-style-type: none"> <li>- 2 trips per day during season of use for two permits;</li> <li>- 2 trips per year during season of use for other permit.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Limits: 2 trips per day per permit during season of use.</li> </ul>	<ul style="list-style-type: none"> <li>Limits: 2 trips per day per permit during season of use.</li> </ul>	<ul style="list-style-type: none"> <li>Limits: historical use.               <ul style="list-style-type: none"> <li>- 2 trips per day during season of use for two permits;</li> <li>- 2 trips per year during season of use for other permit; and</li> <li>- additional trips could be allocated on a case-by-case basis.</li> </ul> </li> </ul>
<b>Number of Permits (Maximum number)</b>	<ul style="list-style-type: none"> <li>One permit.</li> </ul>	<ul style="list-style-type: none"> <li>Three permits.</li> </ul>	<ul style="list-style-type: none"> <li>Three permits.</li> <li>Permits not routinely renewed will be eliminated.</li> </ul>	<ul style="list-style-type: none"> <li>30 permits.</li> </ul>	<ul style="list-style-type: none"> <li>Three permits</li> <li>Additional permits could be allocated on a case-by-case basis.</li> </ul>
<b>Boat Size (Maximum size)</b>	<ul style="list-style-type: none"> <li>Carry up to six passengers.</li> </ul>	<ul style="list-style-type: none"> <li>Carry up to six passengers.</li> </ul>	<ul style="list-style-type: none"> <li>Carry up to six passengers.</li> </ul>	<ul style="list-style-type: none"> <li>Carry up to 10 passengers.</li> </ul>	<ul style="list-style-type: none"> <li>Carry up to six passengers.</li> </ul>



**Table 2-5. Summary and Comparison of Alternatives - Commercial Motorized Tour Boating**

<b>Motorized Tour Boating (MTB)</b>	<b>Alternative A Fewer Watercraft &amp; Less Visitor Use</b>	<b>Alternative B Current Management/ No Action</b>	<b>Alternative C Angler &amp; Floater Enhancement/More Watercraft &amp; Visitor Use</b>	<b>Alternative D Maximum Watercraft &amp; Visitor Use</b>	<b>Alternative E Preferred Alternative</b>
<b>Season of Use</b>	May 1 - September 30.	May 1 - September 30.	May 1 - September 15; extension from 9/16 - 9/30, providing monitoring indicates no spawning in major areas.	April 1 - October 31.	May 1 - September 15; extension from 9/16 - 9/30, providing monitoring indicates no spawning in major areas.
<b>Allocation/Limits (Trips per day)</b>					
<b>Applegate Reach</b>	• Maximum round trips per day is 12.	• Maximum round trips per day is 19.	• Maximum round trips per day is 12.	• Maximum round trips per day is 26.	• Maximum round trips per day is 19.
<b>Dunn Reach</b>	• Maximum round trips per day is 8, except on July 4th and weekends in July and August when it is 4 trips.	• Maximum round trips per day is 19, except on weekends in July and August when it is 6 trips.	• Maximum round trips per day is 8, except on July 4th and weekends in July and August when it is 4 trips before noon.	• Maximum round trips per day is 16, except on July 4th and weekends in July and August when it is 8 trips.	• Maximum round trips per day is 8, except on July 4th and weekends in July and August when it is 4 trips before noon.
<b>Safety Sites of Concern</b>	• No areas designated.	• No areas designated.	• Spotters required when view and setdown conditions are not met.	• Spotters required when view and setdown conditions are not met.	• Spotters required when view and setdown conditions are not met.
<b>Groups/Runs</b>	• Operator discretion.	• Groups/runs required - no separation times identified. • Maximum of six groups per day.	• Groups/runs required. • MTB time separations for runs < two minutes. • Maximum of six groups per day.	• Groups/runs required. • MTB time separations for runs < two minutes. • Maximum of six groups per day.	• Groups/runs required. • MTB time separations for runs < two minutes. • Maximum of six groups per day.



**Table 2-5. Summary and Comparison of Alternatives - Commercial Motorized Tour Boating**

<b>Motorized Tour Boating (MTB)</b>	<b>Alternative A Fewer Watercraft &amp; Less Visitor Use</b>	<b>Alternative B Current Management/ No Action</b>	<b>Alternative C Angler &amp; Floater Enhancement/More Watercraft &amp; Visitor Use</b>	<b>Alternative D Maximum Watercraft &amp; Visitor Use</b>	<b>Alternative E Preferred Alternative</b>
<b>Boat Size</b> (Maximum size)	<ul style="list-style-type: none"> <li>• 1 MTB up to 43'x14'.</li> <li>• Others up to 36'x12'6".</li> </ul>	<ul style="list-style-type: none"> <li>• 2 MTBs up to 43'x 14'.</li> <li>• Others up to 36'x12'6".</li> </ul>	<ul style="list-style-type: none"> <li>• All MTBs up to 36'x12'6".</li> </ul>	<ul style="list-style-type: none"> <li>• 2 MTBs up to 43'x14'.</li> <li>• Others up to 36'x12'6".</li> </ul>	<ul style="list-style-type: none"> <li>• All MTBs up to 36'x12'6".</li> </ul>
<b>Number of permits</b> (Maximum number)	<ul style="list-style-type: none"> <li>• 4 permits.</li> </ul>	<ul style="list-style-type: none"> <li>• 2 permits.</li> </ul>	<ul style="list-style-type: none"> <li>• 2 permits.</li> </ul>	<ul style="list-style-type: none"> <li>• 4 permits.</li> </ul>	<ul style="list-style-type: none"> <li>• 2 permits.</li> </ul>
<b>Notice Displays</b>	<ul style="list-style-type: none"> <li>• Operator discretion.</li> </ul>	<ul style="list-style-type: none"> <li>• Notice display required on lead MTB in a group/run.</li> </ul>	<ul style="list-style-type: none"> <li>• Notice display required for all MTBs in a group/run.</li> </ul>	<ul style="list-style-type: none"> <li>• Notice display required for all MTBs in a group/run.</li> </ul>	<ul style="list-style-type: none"> <li>• Notice display required for all MTBs in a group/run.</li> </ul>
<b>Off Plane Procedures</b>	<ul style="list-style-type: none"> <li>• Operator discretion.</li> </ul>	<ul style="list-style-type: none"> <li>• Off plane required in Hellgate Canyon.</li> </ul>	<ul style="list-style-type: none"> <li>• Off plane required in Hellgate Canyon, boat ramps, county-designated swim areas, and some erosion sensitive areas: Applegate Riffle, 1000 Rocks, Finley Bend, Brushy Chutes, and Ferry Hole.</li> </ul>	<ul style="list-style-type: none"> <li>• Off plane required in Hellgate Canyon, boat ramps, county-designated swim areas, and some erosion sensitive areas: Applegate Riffle, 1000 Rocks, Finley Bend, Brushy Chutes, and Ferry Hole.</li> <li>• Off plane in some bank fishing concentration areas.</li> </ul>	<ul style="list-style-type: none"> <li>• Off plane required in Hellgate Canyon, boat ramps, county-designated swim areas, and erosion sensitive areas.</li> </ul>
<b>Annual Daily Schedule</b>	<ul style="list-style-type: none"> <li>• Operator schedule.</li> </ul>	<ul style="list-style-type: none"> <li>• Annual daily schedule required.</li> <li>• Schedule changes approved as authorized.</li> </ul>	<ul style="list-style-type: none"> <li>• Annual daily schedule required.</li> <li>• Schedule changes not authorized.</li> </ul>	<ul style="list-style-type: none"> <li>• Annual daily schedule required.</li> <li>• Schedule changes approved as authorized.</li> </ul>	<ul style="list-style-type: none"> <li>• Annual daily schedule required.</li> <li>• Schedule changes not authorized.</li> </ul>



**Table 2-5. Summary and Comparison of Alternatives - Commercial Motorized Tour Boating**

<b>Motorized Tour Boating (MTB)</b>	<b>Alternative A Fewer Watercraft &amp; Less Visitor Use</b>	<b>Alternative B Current Management/ No Action</b>	<b>Alternative C Angler &amp; Floater Enhancement/More Watercraft &amp; Visitor Use</b>	<b>Alternative D Maximum Watercraft &amp; Visitor Use</b>	<b>Alternative E Preferred Alternative</b>
<b>Daily Use</b> (Time allowed in planning area)	<ul style="list-style-type: none"> <li>• Operator schedule.</li> </ul>	<ul style="list-style-type: none"> <li>• 9:00 a.m. to 8:30 p.m., May - August.</li> <li>• 9:30 a.m. to 8:30 p.m. in September.</li> </ul>	<ul style="list-style-type: none"> <li>• 10:30 a.m. to 7:00 p.m., May - September.</li> </ul>	Daylight hours, April - October.	<ul style="list-style-type: none"> <li>• 9:00 a.m. to 8:30 p.m., May - August 14.</li> <li>• 9:30 a.m. to 8:30 p.m., August 15 - September.</li> </ul>



**Table 2-6. Summary and Comparison of Alternatives - Special Motorized Boating Events**

<b>Special Motorized Boating Events</b>	<b>Alternative A Fewer Watercraft &amp; Less Visitor Use</b>	<b>Alternative B Current Management/ No Action</b>	<b>Alternative C Angler &amp; Floater Enhancement/More Watercraft &amp; Visitor Use</b>	<b>Alternative D Maximum Watercraft &amp; Visitor Use</b>	<b>Alternative E Preferred Alternative</b>
<b>Allocation/Limits</b>	• Event limited to 2 hrs./day.	• Entries limited to 2 hrs./day.	• No limits.	• No limits.	• Entries limited to 2 hrs./day .
<b>River Reach</b>	• Allowed in Applegate and Dunn reaches.	• Allowed in Applegate and Dunn reaches.	• Not allowed in Hellgate Recreation Area.	• Year-round in Applegate and Dunn reaches.	• Allowed in Applegate and Dunn reaches.
<b>Number of Permits (Maximum number)</b>	• 2 permits: Memorial Day Boatnik and Labor Day boat races. • No additional permits.	• 2 permits: Memorial Day Boatnik and Labor Day boat races. • No additional permits.	• No permits.	• 5 permits, including permits for Memorial Day Boatnik and Labor Day boat races.	• 2 permits: Memorial Day Boatnik and Labor Day boat races. A greater number of permits would be considered on a case-by-case basis.
<b>New Special Motorized Boating Events (i.e., competitive events)</b>	• No requirements. • Traditional motorized boating events allowed.	• Traditional motorized boating events allowed. • Nontraditional events allowed pending site-specific environmental analysis (i.e., combination Memorial Day Boatnik and Labor Day races, including an unlimited class jet boat race).	• Special motorized boating events not allowed.	• Nontraditional watercraft events would be considered pending site-specific environmental analysis (e.g., unlimited class jet boat events, hovercraft uses).	• Traditional motorized boating events allowed. • Nontraditional events would be considered on a case-by-case basis. (i.e., combination Memorial Day Boatnik and Labor Day races, including an unlimited class jet boat race).



**Table 2-7. Summary and Comparison of Alternatives - Nonmotorized Float Boating**

<b>Nonmotorized Float Boating</b>	<b>Alternative A</b> Fewer Watercraft & Less Visitor Use	<b>Alternative B</b> Current Management/ No Action	<b>Alternative C</b> Angler & Floater Enhancement/More Watercraft & More Visitor Use	<b>Alternative D</b> Maximum Watercraft & Visitor Use	<b>Alternative E</b> Preferred Alternative
<b>Allocation/Limits</b> (Commercial and private nonmotorized )	•Maximum of 120 boat trips per day split 50/50 between private and commercial boaters.	• No limits.	• No limits now. • Limits in future if carrying capacity reached.	• No limits.	• No limits now. • Limits in future if carrying capacity reached.

**Table 2-8. Summary and Comparison of Alternatives - Nonmotorized Boat Angling**

<b>Nonmotorized Boat Angling</b>	<b>Alternative A</b> Fewer Watercraft & Less Visitor Use	<b>Alternative B</b> Current Management/ No Action	<b>Alternative C</b> Angler & Floater Enhancement/More Watercraft & Visitor Use	<b>Alternative D</b> Maximum Watercraft & Visitor Use	<b>Alternative E</b> Preferred Alternative
<b>Allocation/Limits</b>	• Limits: equals 1985 visitor use.	• No limits.	• No limits now. • Limits in the future if carrying capacity is reached.	• No limits.	• No limits now. • Limits in the future if carrying capacity is reached.
<b>Season of Use/River Reach</b>	• Year-round in Applegate and Dunn reaches.	• Year-round in Applegate and Dunn reaches.	• Year-round in Applegate and Dunn reaches.	• Year-round in Applegate and Dunn reaches.	• Year-round in Applegate and Dunn reaches.



**Table 2-9. Summary and Comparison of Alternatives - Boater Fees and Permits and User Fees**

<b>Boater Fees and Permits; User Fees</b>	<b>Alternative A Fewer Watercraft &amp; Less Visitor Use</b>	<b>Alternative B Current Management/No Action</b>	<b>Alternative C Angler &amp; Floater Enhancement/More Watercraft &amp; More Visitor Use</b>	<b>Alternative D Maximum Watercraft &amp; Visitor Use</b>	<b>Alternative E Preferred Alternative</b>
<b>Boater Fees and Permits by Commercially Guided Watercraft</b>	<ul style="list-style-type: none"> <li>• Required.</li> </ul>	<ul style="list-style-type: none"> <li>• Required.</li> </ul>	<ul style="list-style-type: none"> <li>• Required.</li> <li>• Limited permits in future if carrying is capacity reached.</li> </ul>	<ul style="list-style-type: none"> <li>• Required.</li> </ul>	<ul style="list-style-type: none"> <li>• Required.</li> <li>• Limited permits in future if carrying is capacity reached.</li> </ul>
<b>Boater Fees and Permits by Watercraft for Private Use</b>	<ul style="list-style-type: none"> <li>• Fees and permits required.</li> <li>• Lottery system for permits.</li> </ul>	<ul style="list-style-type: none"> <li>• Not Required.</li> </ul>	<ul style="list-style-type: none"> <li>• Fees not required, but would be in the future if carrying capacity is reached.</li> <li>• Permits required.</li> <li>• Unlimited permits for nonmotorized boat angling, nonmotorized float boating, and motorized boating services and activities. Limited permits in the future if carrying capacity is reached.</li> </ul>	<ul style="list-style-type: none"> <li>• Fees required.</li> <li>• Unlimited permits.</li> </ul>	<ul style="list-style-type: none"> <li>• Fees not required, but would be in the future if carrying capacity is reached.</li> <li>• Unlimited permits for nonmotorized boat angling, nonmotorized float boating, and motorized boating services and activities. Limited permits in the future if carrying capacity is reached.</li> </ul>
<b>User Fees</b>	<ul style="list-style-type: none"> <li>• Required.</li> </ul>	<ul style="list-style-type: none"> <li>• No user fee.</li> </ul>	<ul style="list-style-type: none"> <li>• No user fee.</li> </ul>	<ul style="list-style-type: none"> <li>• Required.</li> </ul>	<ul style="list-style-type: none"> <li>• No user fee.</li> </ul>



Table 2-10. Summary and Comparison of Alternatives - Recreational Opportunities/Camping

Camping	Alternative A Fewer Watercraft & Less Visitor Use	Alternative B Current Management/ No Action	Alternative C Angler & Floater Enhancement/More Watercraft & More Visitor Use	Alternative D Maximum Watercraft & Visitor Use	Alternative E Preferred Alternative
<b>Corridor Areas Open</b>	Hellgate Park to Grave Creek.	Hellgate Park to Grave Creek - right bank; Almeda Park to Grave Creek - left bank	Hellgate Park to Grave Creek.	Hellgate Canyon to Grave Creek.	Hellgate Canyon to Grave Creek.
<b>Primitive Camping Areas</b> (Without improvements e.g., toilets, trash cans)	• None.	<ul style="list-style-type: none"> <li>• North Zigzag Creek</li> <li>• Paint Creek</li> <li>• Rocky Bar</li> <li>• Stratton Creek</li> <li>• Upper Ennis</li> <li>• Zigzag Creek</li> </ul>	<ul style="list-style-type: none"> <li>• Argo Creek</li> <li>• Argo Riffle</li> <li>• Bailey Creek North</li> <li>• Bailey Creek South</li> <li>• Dunn</li> <li>• Lower Dunn</li> <li>• Rocky Bar</li> <li>• Salmon</li> <li>• Steelhead Beach</li> <li>• Smith Gulch</li> <li>• Upper Grave Creek</li> <li>• Wooldridge</li> <li>• Zigzag Creek</li> </ul>	<ul style="list-style-type: none"> <li>• Argo Creek</li> <li>• Argo Riffle</li> <li>• Bailey Creek North</li> <li>• Bailey Creek South</li> <li>• Canyon</li> <li>• Ducky</li> <li>• Dunn</li> <li>• Indian Riffle</li> <li>• Lower Dunn</li> <li>• Lower Morrison</li> <li>• No Name</li> <li>• Ouzel</li> <li>• Salmon</li> <li>• Smith Gulch</li> <li>• Steelhead Beach</li> <li>• Tahiti</li> <li>• Takelma</li> <li>• Upper Grave Creek</li> <li>• Wooldridge</li> <li>• Zigzag Creek</li> </ul>	<ul style="list-style-type: none"> <li>• North Zigzag Creek</li> <li>• Rocky Bar</li> <li>• Zigzag Creek</li> </ul>



**Table 2-10. Summary and Comparison of Alternatives - Recreational Opportunities/Camping**

Camping	Alternative A Fewer Watercraft & Less Visitor Use	Alternative B Current Management/ No Action	Alternative C Angler & Floater Enhancement/More Watercraft & More Visitor Use	Alternative D Maximum Watercraft & Visitor Use	Alternative E Preferred Alternative
Developed Camping Areas	<ul style="list-style-type: none"> <li>• Argo</li> <li>• Hellgate Park</li> <li>• Lower Hellgate</li> <li>• Robert Dean</li> </ul>	<ul style="list-style-type: none"> <li>• Argo</li> <li>• Hellgate Park</li> <li>• Lower Hellgate</li> <li>• Rand</li> <li>• Robert Dean</li> </ul>	<ul style="list-style-type: none"> <li>• Almeda Mine</li> <li>• Argo</li> <li>• Chair</li> <li>• Griffin Lane Complex</li> <li>• Hellgate Park</li> <li>• Hussey Lane</li> <li>• Paint Creek (float-in)</li> <li>• Rand</li> <li>• Robert Dean</li> <li>• Rocky Bar (1 site)</li> <li>• Upper Ennis (float-in)</li> <li>• Upper Grave Creek</li> <li>• Indian Mary County Park Extension</li> </ul>	<ul style="list-style-type: none"> <li>• Argo</li> <li>• Almeda Mine</li> <li>• Chair Riffle</li> <li>• Sloan Hayfield</li> <li>• Ferry Road River Front</li> <li>• Flanagan Slough (float-in)</li> <li>• Griffin Lane Complex</li> <li>• Hellgate Beach</li> <li>• Hellgate Bridge</li> <li>• Hellgate Park</li> <li>• Hussey Lane</li> <li>• Hog Creek - Grave Creek (trail sites)</li> <li>• Jumpoff Joe Creek</li> <li>• North Zigzag Creek</li> <li>• Paint Creek (float-in)</li> <li>• Peach Orchard</li> <li>• Rand</li> <li>• Robert Dean (float-in)</li> <li>• Robertson Bridge</li> <li>• Rocky Bar (1 site)</li> <li>• Stratton Creek (float-in)</li> <li>• Upper Ennis (float-in)</li> <li>• Upper Grave Creek</li> </ul>	<ul style="list-style-type: none"> <li>• Argo</li> <li>• Chair</li> <li>• Lower Hellgate</li> <li>• Paint Creek (float-in)</li> <li>• Rand</li> <li>• Robert Dean (float-in)</li> <li>• Upper Ennis (float-in)</li> <li>• Stratton Creek(float-in)</li> <li>• Indian Mary County Park Extension</li> </ul>



**Table 2-10. Summary and Comparison of Alternatives - Recreational Opportunities/Camping**

<b>Camping</b>	<b>Alternative A</b> Fewer Watercraft & Less Visitor Use	<b>Alternative B</b> Current Management/ No Action	<b>Alternative C</b> Angler & Floater Enhancement/More Watercraft & More Visitor Use	<b>Alternative D</b> Maximum Watercraft & Visitor Use	<b>Alternative E</b> Preferred Alternative
<b>Human Waste Pack-Out</b>	• Required.	• Required commercial only.	• Required.	• Required.	• Required.
<b>Campfires</b>	• State regulations. • Fire pans not required.	• State regulations. • Fire pans not required.	• State regulations. • Fire pans required where fire grates (or equivalent) are not provided.	• State regulations. • Fire pans required where fire grates (or equivalent) are not provided.	• State regulations. • Fire pans required where fire grates (or equivalent) are not provided.
<b>Day Limits</b>	• 14 days per site during high summer use unless otherwise posted.	• 14 days per site unless otherwise posted.	• 5 days per site during high summer use unless otherwise posted.	• 4 days per site during high summer use unless otherwise posted.	• 4 days per site during high summer use unless otherwise posted.
<b>Maximum Group Size</b>	• No limit.	• No limit.	• 30 people per campsite.	• 30 people per campsite.	• 30 people per campsite.



**Table 2-11. Summary and Comparison of Alternatives - Recreational Opportunities/Trails**

Trails	Alternative A Fewer Watercraft & Less Visitor Use	Alternative B Current Management/ No Action	Alternative C Angler & Floater Enhancement/More Watercraft & More Visitor Use	Alternative D Maximum Watercraft & Visitor Use	Alternative E Preferred Alternative
<b>Develop New Trails</b>	<ul style="list-style-type: none"> <li>• Hellgate Placer Mine of Wells Trail.</li> </ul>	<ul style="list-style-type: none"> <li>• None.</li> </ul>	<ul style="list-style-type: none"> <li>• Robert Dean (Ash Gulch to Centennial, Argo to Grave Creek)</li> <li>• Rainbow</li> <li>• Hellgate Placer Mine of Wells Trail</li> </ul>	<ul style="list-style-type: none"> <li>• Powerline</li> <li>• Robert Dean (Ash Gulch to Centennial, Argo to Grave Creek)</li> <li>• Ferry Road Nature Trail</li> <li>• Applegate Landing Trail</li> <li>• Rainbow</li> <li>• Merlin-Grave Creek Bicycle Route</li> <li>• Flanagan Slough Interpretive Trail</li> <li>• Galice Creek/Taylor Creek Trails</li> <li>• Hellgate Placer Mine of Wells Trail</li> </ul>	<ul style="list-style-type: none"> <li>• Robert Dean (Ash Gulch to Centennial, Argo to Grave Creek)</li> <li>• Applegate Landing Trail</li> <li>• Rainbow</li> <li>• Flanagan Slough Interpretive Trail</li> <li>• Hellgate Placer Mine of Wells Trail</li> </ul>



**Table 2-11. Summary and Comparison of Alternatives - Recreational Opportunities/Trails**

Trails	Alternative A Fewer Watercraft & Less Visitor Use	Alternative B Current Management/ No Action	Alternative C Angler & Floater Enhancement/More Watercraft & More Visitor Use	Alternative D Maximum Watercraft & Visitor Use	Alternative E Preferred Alternative
<b>Improve and Expand Existing Trails</b>	• Umpqua Joe Trail.	• None.	• Hellgate • Stratton Creek • Buckhorn Mountain • Robert Dean (Hellgate Bridge to Ash Gulch, Centennial Gulch to Argo)	• East Cliffs • Matson to Ferry • Hellgate • Stratton Creek • Buckhorn Mountain • Robert Dean (Hellgate Bridge to Ash Gulch, Centennial Gulch to Argo) • Whitehorse Nature Trail • Umpqua Joe Trail	• Hellgate • Buckhorn Mountain • Robert Dean (Hellgate Bridge to Ash Gulch, Centennial Gulch to Argo) • Whitehorse Nature Trail • Umpqua Joe Trail
<b>Off-Highway Vehicle Trails</b>	• None.	• None.	• Buckhorn Mountain	• Buckhorn Mountain • Robert Dean	• Buckhorn Mountain



**Table 2-12. Summary and Comparison of Alternatives - Recreational Opportunities/Day-Use Areas**

Day-Use Areas	Alternative A Fewer Watercraft & Less Visitor Use	Alternative B Current Management/ No action	Alternative C Angler & Floater Enhancement/More Watercraft & More Visitor Use	Alternative D Maximum Watercraft & Visitor Use	Alternative E Preferred Alternative
Primitive Day-Use Areas	<ul style="list-style-type: none"><li>• None.</li></ul>	<ul style="list-style-type: none"><li>• North Zigzag Creek</li><li>• Rocky Bar</li><li>• Steelhead</li></ul>	<ul style="list-style-type: none"><li>• Argo Creek</li><li>• Argo Riffle</li><li>• Bailey Creek North</li><li>• Bailey Creek South</li><li>• Canyon</li><li>• Dunn</li><li>• Flanagan Slough</li><li>• Hellgate</li><li>• Hellgate Bridge Area</li><li>• Hussey Lane</li><li>• Lower Dunn</li><li>• Lower Morrison's</li><li>• No Name Gulch</li><li>• Paint Creek</li><li>• Robert Dean</li><li>• Rocky Bar</li><li>• Rogue Riffle Drive</li><li>• Salmon</li><li>• Smith Gulch</li><li>• Steelhead</li><li>• Stratton Creek</li><li>• Taylor Bar</li><li>• Upper Ennis</li></ul>	<ul style="list-style-type: none"><li>• Argo Creek</li><li>• Argo Riffle</li><li>• Bailey Creek North</li><li>• Bailey Creek South</li><li>• Canyon</li><li>• Ducky</li><li>• Dunn</li><li>• Flanagan Slough</li><li>• Hellgate</li><li>• Hellgate Bridge Area</li><li>• Hellgate Park</li><li>• Hussey Lane</li><li>• Indian Riffle</li><li>• Lower Dunn</li><li>• Lower Hellgate</li><li>• Lower Morrison's</li><li>• No Name Gulch</li><li>• North Zigzag Creek</li><li>• Paint Creek</li><li>• Ouzel</li><li>• Rocky Bar</li><li>• Rogue Riffle Drive</li><li>• Salmon</li><li>• Smith Gulch</li><li>• Steelhead</li><li>• Stratton Creek</li><li>• Taylor Bar</li><li>• Upper Ennis</li></ul>	<ul style="list-style-type: none"><li>• Brushy Chutes</li><li>• Flanagan Slough</li><li>• Hellgate</li><li>• Hellgate Bridge Area</li><li>• Hussey Lane</li><li>• Lower Dunn</li><li>• North Zigzag Creek</li><li>• Paint Creek</li><li>• Rocky Bar</li><li>• Steelhead</li><li>• Stratton Creek</li><li>• Upper Ennis</li><li>• Zigzag Creek</li></ul>



**Table 2-12. Summary and Comparison of Alternatives - Recreational Opportunities/Day-Use Areas**

<b>Day-Use Areas</b>	<b>Alternative A</b> Fewer Watercraft & Less Visitor Use	<b>Alternative B</b> Current Management/ No action	<b>Alternative C</b> Angler & Floater Enhancement/More Watercraft & More Visitor Use	<b>Alternative D</b> Maximum Watercraft & Visitor Use	<b>Alternative E</b> Preferred Alternative
<b>Developed Day-Use Areas</b>	<ul style="list-style-type: none"> <li>• Applegate Landing Area</li> <li>• Argo</li> <li>• Carpenters Island</li> <li>• Chair</li> <li>• Grave Creek</li> <li>• Hellgate Bridge Viewpoint</li> <li>• Hellgate Canyon Viewpoint</li> <li>• Hellgate Park</li> <li>• Hog Creek</li> <li>• Rainbow</li> <li>• Rand</li> </ul>	<ul style="list-style-type: none"> <li>• Applegate Landing Area</li> <li>• Argo</li> <li>• Chair</li> <li>• Captenters Island</li> <li>• Finley Bend</li> <li>• Grave Creek</li> <li>• Hellgate Bridge Viewpoint</li> <li>• Hellgate Canyon Viewpoint</li> <li>• Hellgate Park</li> <li>• Hog Creek</li> <li>• Lower Hellgate</li> <li>• Rainbow</li> <li>• Rand</li> </ul>	<ul style="list-style-type: none"> <li>• Applegate Landing</li> <li>• Argo</li> <li>• Carpenter's Island</li> <li>• Chair</li> <li>• Finley Bend</li> <li>• Grave Creek</li> <li>• Lower Hellgate</li> <li>• Hellgate Park</li> <li>• Hellgate Bridge Viewpoint</li> <li>• Hellgate Canyon Viewpoint</li> <li>• Hog Creek</li> <li>• Jumpoff Joe</li> <li>• Rainbow</li> <li>• Rand</li> <li>• Robertson Bridge</li> <li>• Bud Lewis</li> </ul>	<ul style="list-style-type: none"> <li>• Almeda (BLM)</li> <li>• Applegate Landing</li> <li>• Argo</li> <li>• Carpenter's Island</li> <li>• Chair</li> <li>• Ferry Road River Front</li> <li>• Finley Bend</li> <li>• Grave Creek</li> <li>• Griffin Lane Complex</li> <li>• Hog Creek</li> <li>• Hellgate Bridge Viewpoint</li> <li>• Hellgate Canyon Viewpoint</li> <li>• Jumpoff Joe</li> <li>• Matson - Ferry (trail)</li> <li>• Rainbow</li> <li>• Rand</li> <li>• Robert Dean</li> <li>• Robertson Bridge Area</li> </ul>	<ul style="list-style-type: none"> <li>• Applegate Landing</li> <li>• Argo</li> <li>• Carpenter's Island</li> <li>• Chair</li> <li>• Finley Bend</li> <li>• Grave Creek</li> <li>• Griffin Lane Complex Viewpoint</li> <li>• Hellgate Bridge Viewpoint</li> <li>• Hellgate Canyon Viewpoint</li> <li>• Hellgate Park</li> <li>• Hog Creek</li> <li>• Lower Hellgate</li> <li>• Rainbow</li> <li>• Rand</li> <li>• Robert Dean</li> <li>• Robertson Bridge Area</li> <li>• Bud Lewis</li> </ul>
<b>Backcountry Byways</b>	• None.	• Galice-Hellgate	• Galice-Hellgate	• Galice-Hellgate	• Galice-Hellgate



**Table 2-12. Summary and Comparison of Alternatives - Recreational Opportunities/Day-Use Areas**

Day-Use Areas	Alternative A Fewer Watercraft & Less Visitor Use	Alternative B Current Management/ No action	Alternative C Angler & Floater Enhancement/More Watercraft & More Visitor Use	Alternative D Maximum Watercraft & Visitor Use	Alternative E Preferred Alternative
<b>Watchable Wildlife Sites</b>	<ul style="list-style-type: none"> <li>• Flanagan Slough</li> <li>• Hellgate Overlook</li> <li>• Hog Creek Landing</li> <li>• Whitehorse</li> </ul>	<ul style="list-style-type: none"> <li>• Flanagan Slough</li> <li>• Hellgate Overlook</li> <li>• Hog Creek Landing</li> <li>• Whitehorse</li> </ul>	<ul style="list-style-type: none"> <li>• Flanagan Slough</li> <li>• Griffin Park/Griffin Lane Complex</li> <li>• Hellgate Overlook</li> <li>• Hog Creek Landing</li> <li>• Whitehorse</li> </ul>	<ul style="list-style-type: none"> <li>• Ferry Road River Front</li> <li>• Flanagan Slough</li> <li>• Griffin Park/Griffin Lane Complex</li> <li>• Hellgate Overlook</li> <li>• Hog Creek Landing</li> <li>• Whitehorse</li> </ul>	<ul style="list-style-type: none"> <li>• Flanagan Slough</li> <li>• Hellgate Overlook</li> <li>• Hog Creek Landing</li> <li>• Whitehorse</li> </ul>
<b>Limited Off-Highway Vehicle (OHV) Use Areas</b>	<ul style="list-style-type: none"> <li>• Griffin Lane Complex</li> <li>• Rocky Bar</li> </ul>	<ul style="list-style-type: none"> <li>• Griffin Lane Complex</li> <li>• Rand</li> <li>• Rocky Bar</li> <li>• Whitehorse</li> </ul>	<ul style="list-style-type: none"> <li>• Argo</li> <li>• Chair</li> <li>• Flanagan Slough</li> <li>• Griffin Lane Complex</li> <li>• Rand</li> <li>• Rocky Bar</li> <li>• Whitehorse</li> <li>• Buckhorn Mountain Trail</li> </ul>	<ul style="list-style-type: none"> <li>• Almeda</li> <li>• Applegate Landing Area</li> <li>• Argo</li> <li>• Chair</li> <li>• Flanagan Slough</li> <li>• Griffin Lane Complex</li> <li>• Rand</li> <li>• Robert Dean</li> <li>• Rocky Bar</li> <li>• Stratton Creek</li> <li>• Buckhorn Mountain Trail</li> <li>• Robert Dean</li> </ul>	<ul style="list-style-type: none"> <li>• Chair</li> <li>• Griffin Lane Complex</li> <li>• Rand</li> <li>• Rocky Bar</li> <li>• Buckhorn Mountain Trail</li> </ul>



Table 2-12. Summary and Comparison of Alternatives - Recreational Opportunities/Day-Use Areas

Day-Use Areas	Alternative A Fewer Watercraft & Less Visitor Use	Alternative B Current Management/ No action	Alternative C Angler & Floater Enhancement/More Watercraft & More Visitor Use	Alternative D Maximum Watercraft & Visitor Use	Alternative E Preferred Alternative
<b>Prohibition of Firearm Discharge Areas</b> (Permitted hunting activities are allowed)	Season: June 1 - September 15. • Applegate landing area • Ferry Road River Front • Flanagan Slough • Griffin Lane Complex • Griffin Park • Whitehorse Park	• None.	Season: June 1 - September 15. • Applegate Landing area • Ferry Road River Front • Flanagan Slough • Griffin Lane Complex • Griffin Park • Hussey Lane • Matson to Ferry • Whitehorse Park	Season: all year. • Entire river corridor.	Season: June 1 - September 15. • Entire river corridor.
Designate and/or develop.					



**Table 2-13. Summary and Comparison of Alternatives - Recreational Opportunities/Public Access**

<b>Public Access</b>	<b>Alternative A</b> Fewer Watercraft & Less Visitor Use	<b>Alternative B</b> Current Management/ No Action	<b>Alternative C</b> Angler & Floater Enhancement/More Visitor Use	<b>Alternative D</b> Maximum Watercraft & Visitor use	<b>Alternative E</b> Preferred Alternative
<b>Maintain Existing Boat Ramps</b>	<ul style="list-style-type: none"> <li>• Ennis</li> <li>• Grave Creek</li> <li>• Griffin</li> <li>• Hog Creek</li> <li>• Rand</li> <li>• Whitehorse</li> </ul>	<ul style="list-style-type: none"> <li>• Grave Creek</li> <li>• Griffin</li> <li>• Hog Creek</li> <li>• Whitehorse</li> </ul>	<ul style="list-style-type: none"> <li>• Hog Creek</li> </ul>	<ul style="list-style-type: none"> <li>• Hog Creek</li> </ul>	<ul style="list-style-type: none"> <li>• Hog Creek</li> </ul>
<b>Improve Boat Ramps</b>	<ul style="list-style-type: none"> <li>• Argo</li> </ul>	<ul style="list-style-type: none"> <li>• Argo</li> <li>• Rand</li> </ul>	<ul style="list-style-type: none"> <li>• Argo</li> <li>• Grave Creek</li> <li>• Hog Creek</li> <li>• Rand</li> </ul>	<ul style="list-style-type: none"> <li>• Argo</li> <li>• Grave Creek</li> <li>• Griffin</li> <li>• Hog Creek</li> <li>• Rand</li> </ul>	<ul style="list-style-type: none"> <li>• Argo</li> <li>• Grave Creek</li> <li>• Griffin</li> <li>• Rand</li> </ul>
<b>New Boat Ramps</b>	<ul style="list-style-type: none"> <li>• None.</li> </ul>	<ul style="list-style-type: none"> <li>• None.</li> </ul>	<ul style="list-style-type: none"> <li>• None.</li> </ul>	<ul style="list-style-type: none"> <li>• Jumpoff Joe</li> <li>• Dunn</li> </ul>	<ul style="list-style-type: none"> <li>• None.</li> </ul>
<b>Main Fishing Access Sites</b>	<ul style="list-style-type: none"> <li>• None.</li> </ul>	<ul style="list-style-type: none"> <li>• Rainbow</li> <li>• Carpenter's Island</li> </ul>	<ul style="list-style-type: none"> <li>• Rainbow</li> <li>• Carpenter's Island</li> </ul>	<ul style="list-style-type: none"> <li>• Rainbow</li> <li>• Carpenter's Island</li> </ul>	<ul style="list-style-type: none"> <li>• Rainbow</li> <li>• Carpenter's Island</li> </ul>
<b>New Fishing Access Sites</b>	<ul style="list-style-type: none"> <li>• None.</li> </ul>	<ul style="list-style-type: none"> <li>• Finley Bend</li> <li>• Steelhead</li> </ul>	<ul style="list-style-type: none"> <li>• Finley Bend</li> <li>• Steelhead</li> <li>• Jumpoff Joe</li> </ul>	<ul style="list-style-type: none"> <li>• Finley Bend</li> <li>• Steelhead</li> <li>• Jumpoff Joe</li> <li>• Taylor Bar</li> </ul>	<ul style="list-style-type: none"> <li>• Finley Bend</li> <li>• Steelhead</li> </ul>
<b>Vehicle Access Regulated</b>	<ul style="list-style-type: none"> <li>• No.</li> </ul>	<ul style="list-style-type: none"> <li>• No.</li> </ul>	<ul style="list-style-type: none"> <li>• No.</li> </ul>	<ul style="list-style-type: none"> <li>• Yes.</li> </ul>	<ul style="list-style-type: none"> <li>• No.</li> </ul>



**Table 2-14. Visitor Services**

Administrative and/or Visitor Center Sites	Alternative A Fewer Watercraft & Less Visitor Use	Alternative B Current Management/ No Action	Alternative C Angler & Floater Enhancement/More Visitor Use	Alternative D Maximum Watercraft & Visitor use	Alternative E Preferred Alternative
Administrative/ Visitor Center	• Merlin or Grants Pass	• Medford and Rand	• Hog Creek	• Rand	• Rand

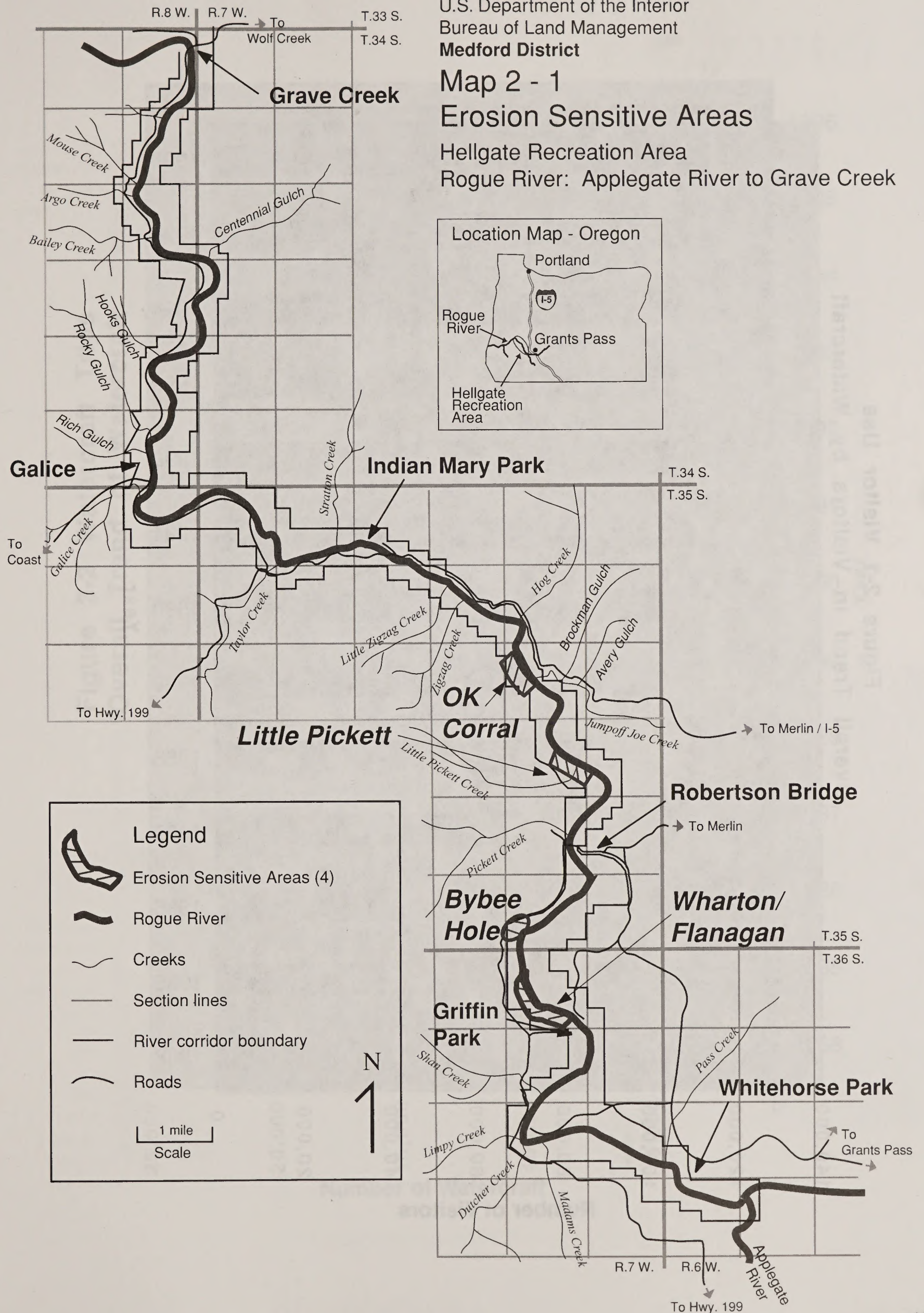


U.S. Department of the Interior  
Bureau of Land Management  
Medford District

# Map 2 - 1 Erosion Sensitive Areas

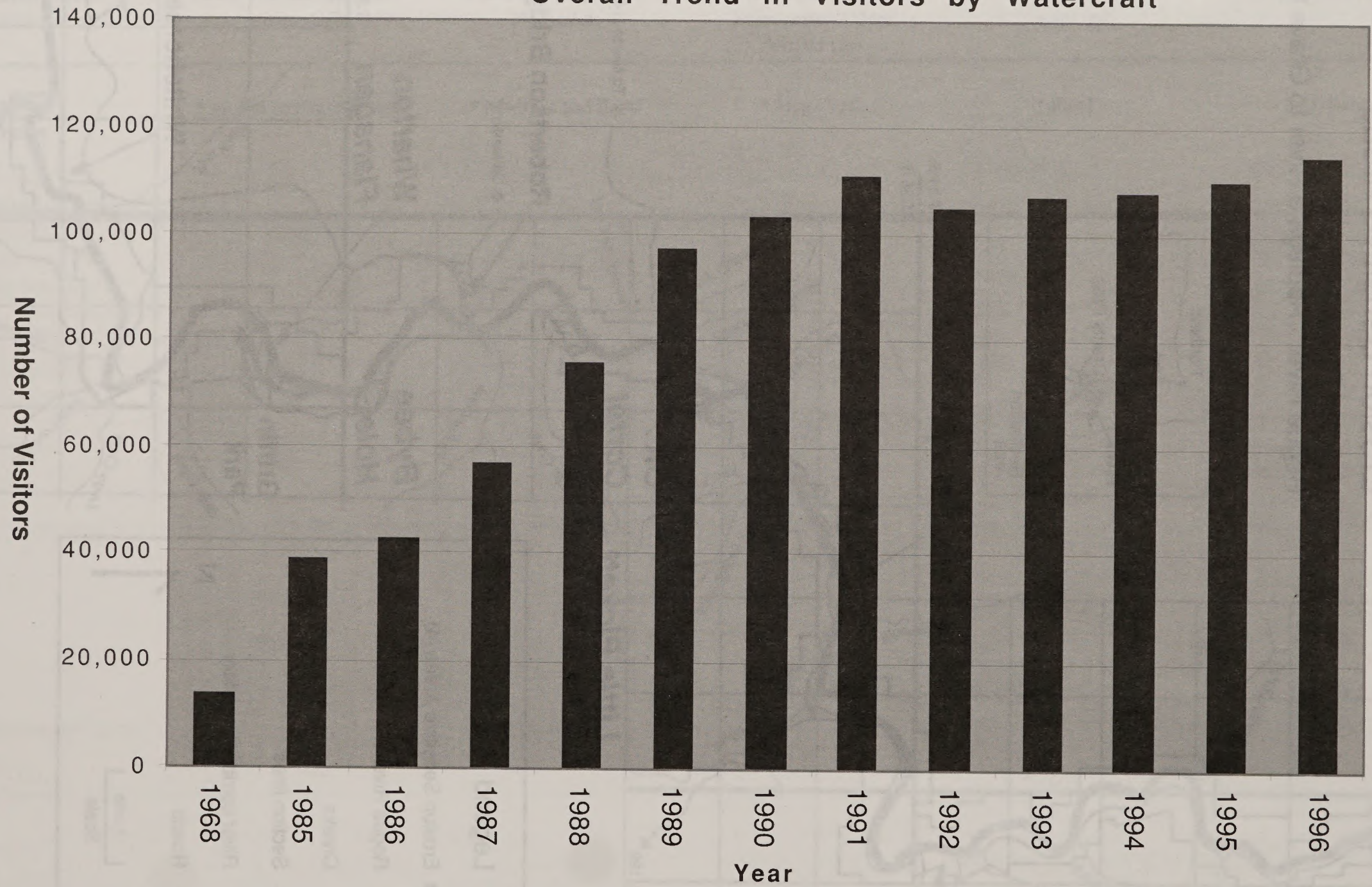
Hellgate Recreation Area

Rogue River: Applegate River to Grave Creek





**Figure 2-1 Visitor Use**  
**Overall Trend in Visitors by Watercraft**





**Figure 2-2 Watercraft Trips  
Overall Trend of Watercraft**

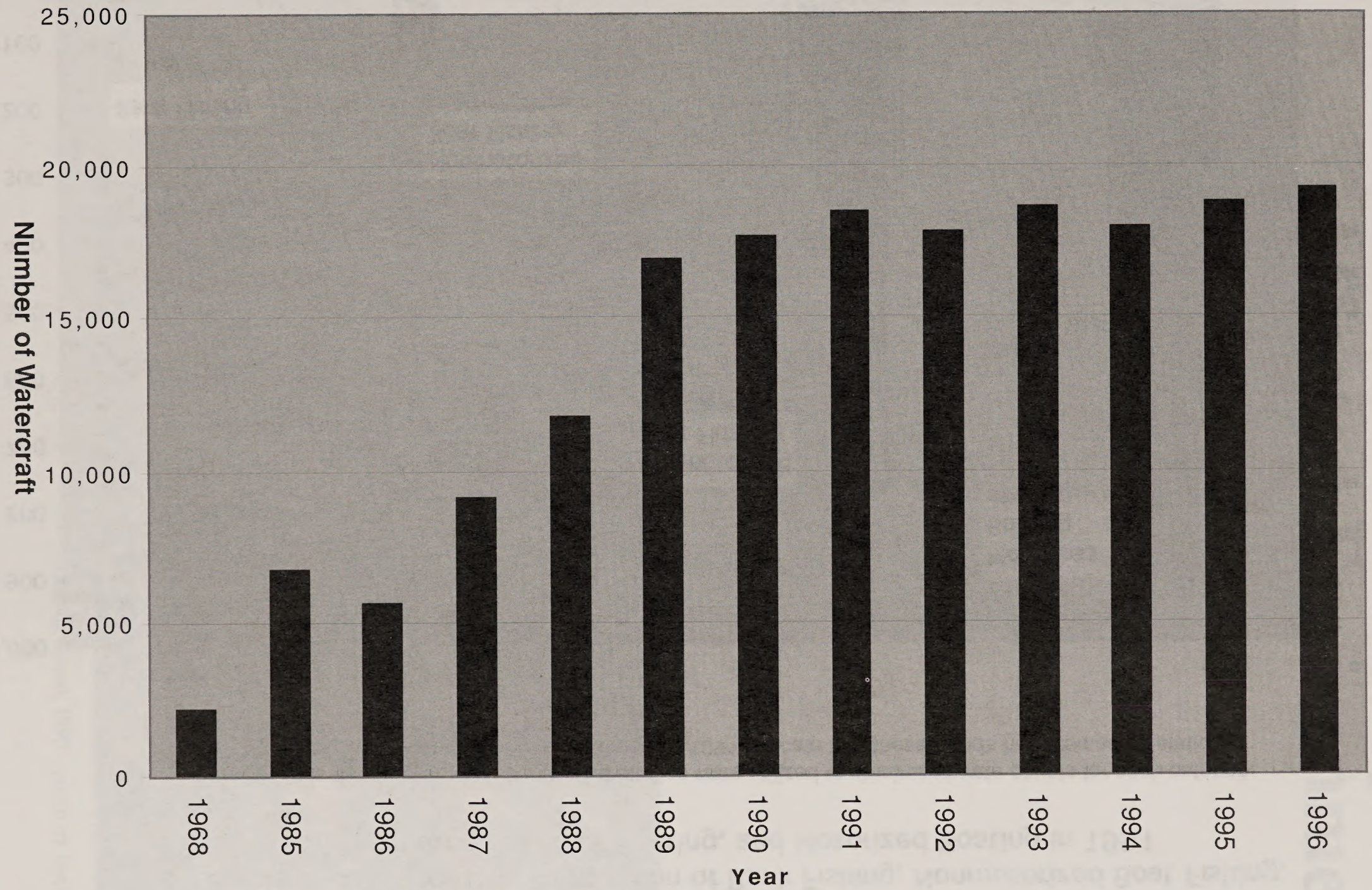
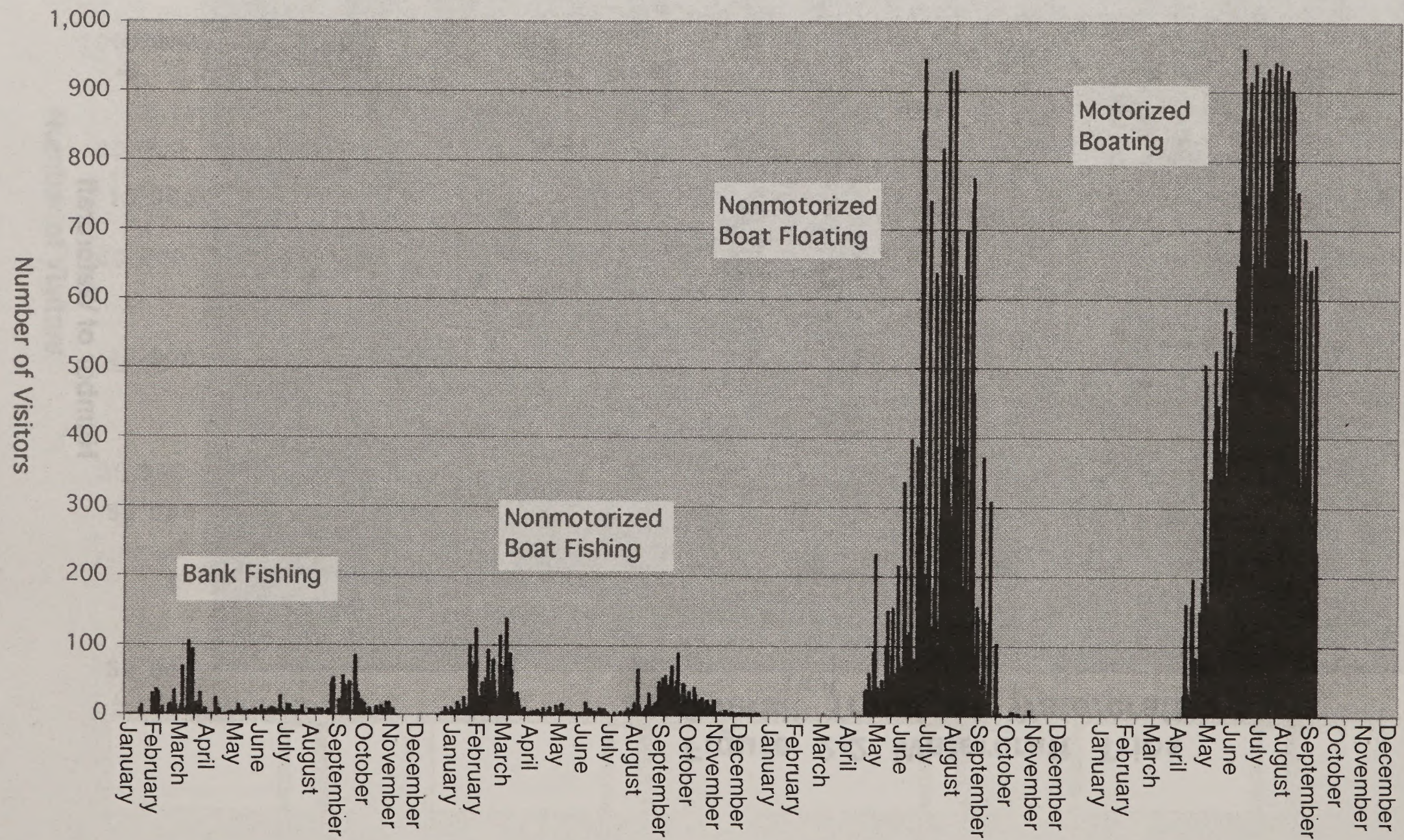




Figure 2-3. Visitor Use Comparison of Bank Fishing, Nonmotorized Boat Fishing, Nonmotorized Float Boating, and Motorized Boating in 1991

1991 was the last year that contracted studies were utilized to obtain accurate counts for each category of activity. Subsequent observation since 1991 indicate that these trends have remained static.





# Chapter 3

## Affected Environment



Canada Geese, 1990 - photo by Becky Brown



# Chapter 3 Affected Environment



Source: U.S. Census Bureau, 1990. Data by county.



This chapter describes the physical, biological, and socioeconomic characteristics of BLM-administered land as they exist in the planning area. Resources that could be affected by BLM management alternatives are emphasized.

## The River's Physical Environment

In the Hellgate Recreation Area, the river has an average gradient of approximately 8 ft/mi. and is characterized by riffle/run/pool channel characteristics with occasional Class II/III rapids. The river averages approximately 300 feet wide. Usable routes for powerboats through some riffles and rapids narrow to 20-40 feet wide. One location, Centennial Rock, narrows to less than 40 feet and is bound by near vertical bedrock walls.

In the upper 12.8 miles to the Hog Creek Ramp, the river has a gradient of approximately 7 ft/mi. and the channel averages approximately 400 feet wide. The channel is characterized by a riffle/run/pool configuration. In the lower 14.5 miles, from the Hog Creek Ramp and the top of Hellgate Riffle through to Grave Creek, the river has a gradient of approximately 10 ft/mi. and averages approximately 200 feet in width. In this section, the channel is characterized by a rapid/run/pool configuration; the rapids are structured by bedrock controls.

There are five distinct vegetation communities within the Hellgate Recreation Area of the Rogue River. All of these communities are shaped by the climate and geology of the broader southwestern Oregon region. This area is significantly drier than further north and geologically it is an extremely complex mix of soils and rock types. There are occasional intrusions of serpentine rocks and soils which contribute significantly to the vegetational characteristics of the area. These serpentine soils are also an important factor in the large number of endemic and special status plants in the area (Whitman 1993 and Appendix F, Botanical Resources Background Paper).

## Assessment of Outstandingly Remarkable Values

The Rogue River was never designated a study river, and outstandingly and remarkable values have never been identified in a formal planning process. It is appropriate to identify them in this document as a means of describing the environment to be affected by various levels of recreational use and development on the river, and to use them to develop desired future conditions.

The following outstandingly remarkable values have been identified by the U.S. Forest Service and the Bureau of Land Management interdisciplinary team (see Appendix B).

**Natural Scenic Qualities.** Interesting varieties of scenery due to the diversity of vegetation, geology, and topography.

**Fisheries Resource.** Salmon and steelhead populations and habitat.

**Recreational Opportunities.** Whitewater floating, fishing, jet boating, camping, hiking, swimming, and sightseeing.

Although the determination of value is a matter of informed professional judgment and interpretation, this process includes the following steps or verification techniques.

- Values identified by the United States Congress and identified in Congressional records.
- Use of resource specialists working as an interdisciplinary team.
- Consideration of uniqueness and rarity at a regional and national level.
- Values must be river-related, owing their existence, or contributing to, the functioning of the river system and its environs.



- Use of qualitative guidelines to help determine significance.
- Verification by other experts in the subject area.

The Rogue River's outstandingly remarkable values (ORVs) were never explicitly identified, as the administrative process of determining eligibility had not been developed. However, the Rogue River's outstanding salmon and steelhead trout fishing, its many miles of near natural scenic environment, and its exciting white water boat trips were principal contributors to its fame.

There is a lengthy legislative history that identifies the Rogue River as either a scenic or wild and scenic river that should be included in a national system (see Appendix IV-A, USDI, BLM, MDO, GPRA 1991). The following summarizes the National Wild and Scenic Rogue River's outstandingly remarkable values.

## **Congressionally Considered Outstandingly Remarkable Values**

Legislative intent was to save for this and future generations certain unspoiled, free-flowing rivers, or river sections, that would symbolize and perpetuate this vanishing heritage of the United States' original landscape. The streams that were found to be free-flowing and having at least one outstandingly remarkable value could be determined as having values that outweighed their value for water development and control purposes. The Rogue River was found to have notably free-flowing characteristics and be well qualified for inclusion into a Wild and Scenic Rivers System and preservation for sound water conservation.

A review of the legislative record shows that Congress primarily considered the following outstandingly remarkable values: natural scenic qualities, the fisheries resource, and recreational opportunities (see Appendix B).

### **Other River Values**

While not specifically singled out by Congress, federal managers of the National Wild and Scenic Rogue River consider the wildlife and cultural resources in the corridor to be significant. The Oregon State Department of Fish and Wildlife recognizes the entire river corridor as requiring special emphasis wildlife management.

### **Cultural**

A number of historic and prehistoric sites are documented along the Rogue River corridor and indicate the richness of this area in both historic and prehistoric resources. Several prehistoric sites have been excavated within the river corridor. All historic and prehistoric sites are protected and preserved under the laws and regulations currently in place and practiced throughout Medford District lands.

### **Wildlife**

Wildlife and the associated habitats along the Rogue River are of special worth: they are an integral part of the river experience that many people expect to have when they visit the Rogue. Blacktail deer, Canada geese, great blue herons, common mergansers, and osprey are commonly seen by visitors. Other wildlife species that will probably be seen are mink, western pond turtle, beaver, and otter. Black bear, raccoon, and turkey vultures are also common.

There are several species of federally-protected raptors that forage and nest in the vicinity of the river. These include the osprey, bald eagle, northern spotted owl, and peregrine falcon.



# Climate

Climatic conditions in the Rogue River basin are heavily influenced by the Pacific ocean weather fronts, which cause cloudy and rainy winters and warm, dry summers. Annual rainfall varies widely from 20 inches near Medford to over 100 inches in the Siskiyou Mountains. The average annual precipitation in the planning area ranges from 40 to 60 inches per year. See Figure 3-1 for the ten-year average daily precipitation and Figure 3-2 for the ten-year average daily temperature.

## Air Resources

### Air Quality

Factors that affect air quality include meteorology and emission sources. Weather processes usually cleanse the air of most pollution. Atmospheric stability is of primary importance. The stability of the air determines the amount of vertical mixing that can occur, which disperses pollutants. Stable air prevents mixing and traps pollutants at the ground level. Unstable air facilitates mixing and dispersal of pollutants.

Seasonal patterns in weather and pollutant emissions influence air quality. The weather pattern in late fall and winter is one of periods of stable air occurring between storm events. These stable periods inhibit dispersion by reducing atmospheric mixing. During the winter, motor vehicles produce more carbon monoxide, and home heating produces fine particulate (PM10) when wood is used as a fuel. These factors combine to produce a higher pollution level for these pollutants during winter (ODEQ 1993).

Atmospheric ventilation is usually better during spring and summer. Less carbon monoxide and particulates are produced during this time. These pollutants are normally not a problem during these seasons (ODEQ 1993). Summer air quality is impacted during relatively poor ventilation periods. Ozone concentrations reach peak levels during sunny warm periods of poor ventilation. Ozone and resulting "smog" are the major concerns in the summer season.

### Pollution Sources

Sources of pollution that impact the Hellgate Recreation Area are classified in two categories: area sources and mobile sources (ODEQ 1993). Area sources are relatively small individual sources of pollution, usually spread over a broad geographic area that collectively contributes emissions. Area sources include: wood stoves, slash and field burning, forest fires, backyard burning, and dust emissions from roads and agricultural tilling. Mobile sources include: motor vehicles, motor boats, off-highway vehicles, and airplanes.

The major impact to air quality in the Hellgate Recreation Area is smoke. A minor source could be emissions from motor vehicles and boats. Pollutants of concern include fine particulate (PM10) and carbon monoxide (CO).

### Fine Particulate

Grants Pass continues to be classified as a nonattainment area for fine particulate (PM10). Grants Pass last exceeded the PM10 24-hour average standard in 1987. Difficulty in meeting the PM10 standard was due primarily to effects from residential wood heating. Maximum levels recorded between 1987 and 1993 occurred in December or January, with the exception of 1987 when September had the maximum level. This was a result of the widespread large fires burning at the time. Maximum levels are never reached in the spring and summer months.



## **Carbon Monoxide**

Grants Pass continues to be classified as a nonattainment area for carbon monoxide 1-hour average and 8-hour average standards. Grants Pass last exceeded the 1-hour standard in 1990 and the 8-hour standard in 1991. Maximum averages all occur from December through February. Maximum levels are never reached during the spring and summer months. A request for redesignation as an attainment area is planned.

## **Visibility**

Visibility is monitored in federal Class I areas during the summer season. The closest Class I area is Crater Lake National Park. Shifts in prescribed burning from summer and early fall have improved visibility impairment over the 1982-84 baseline levels.

## **Light Scattering**

Light scattering has been measured in Grants Pass since 1991. Measurements through 1993 show peak 1-hour and 24-hour averages occur in December and January.

## **Smoke Emissions from Fire**

The principal impact to air quality on the Hellgate Recreation Section and surrounding area is expected to be the temporary visibility impairment caused by smoke from prescribed fires and wildfire.

Potential short duration (single day to several weeks), high level PM<sub>10</sub> emissions would be expected from major wildfire events within the local area or region. Prescribed burning PM<sub>10</sub> emissions would not be expected to exceed PM<sub>10</sub> standards. If this did occur, it most likely would be highly localized and of no more than a single day in duration.

The Clean Air Act, as amended, directs the State of Oregon to meet or exceed national ambient air quality standards by 1994. The Oregon Smoke Management Program (OSMP), a part of the required State Implementation Plan (SIP), identifies strategies for minimizing the impacts of smoke from prescribed burning on the densely-populated, designated, non-attainment, and smoke sensitive areas within western Oregon. Particulate matter with a size of 10 microns or less (PM<sub>10</sub>) is the specific pollutant addressed in the SIP.

Grants Pass is the closest designated area to the recreation section. The Hellgate Recreation Area is classified as a Class II area requiring no special emphasis to minimize smoke impacts. The OSMP does, however, place an emphasis on minimizing impacts on high use recreation areas during peak use periods.

The peak recreation use period for the recreation section is during the months of July and August. Smoke emissions produced by prescribed burning would have a low potential for impacting the recreation section during peak recreation use periods. Prescribed burning is constrained July 4 through Labor Day by the Oregon Visibility Protection Plan. The Medford District has traditionally completed prescribed burning operations by the middle of May, and does not resume burning until early October. Potential impacts from prescribed burning smoke could occur from other federal and private burning west of the coastal crest and north of the Medford District, where conditions allow an extended burn season in the spring and earlier resumption in the fall. However, almost no prescribed burning is conducted in July and August in the vicinity of the recreation section.

The largest potential impact to air quality during the peak recreational period is from residual smoke from wildfire in the region or in the immediate vicinity.



# Fire

## Fire Environment

The fire environment is defined as the conditions, influences, and modifying forces that control fire behavior (Countryman 1972); these include vegetation, weather, and topography. The fire regime (i.e., fire type, intensity, size, and frequency) is dependent upon the fire environment. Vegetation is the one factor of the fire environment that is within the direct control of land managers.

The concepts of risk and hazard serve as links between fire environment, fire regime, and fire management. Risk can be defined as the causative agent of a fire start, such as human activity or lightning. Hazard can be defined as the existence of a fuel complex (the kind, arrangement, volume, condition, and location of flammable material) that constitutes a threat of wildfire ignition, unacceptable fire behavior and severity, or suppression difficulty (Deeming 1990).

The fire environment of the Hellgate Recreation Area is warm and dry. This is a result of its location in the rain shadow on the east side of the crest of the coastal mountain range. The topography for the majority of the area is steep and rugged with deeply incised streams in narrow draws. The fuel complex is dominated by the Douglas-fir plant series with a smaller portion in the tanoak series. The Douglas-fir series has large fuels, a good fuel ladder, and an accumulation of fine fuels and surface litter. The tanoak series has a live fuel ladder with only moderate amounts of fuel accumulation and some large fuels associated with the conifer components of this series (USDA Siskiyou National Forest 1989).

The river canyon and adjacent drainage create local wind conditions that are hard to predict or anticipate. Wind directions at lower elevations can be opposite to high level or ridgetop winds. Strong winds are experienced when wind flow is compressed because of canyon topography. A common summer wind condition is an upriver flow beginning late in the morning, increasing in strength as the temperature increases, and then tapering off by early evening. These wind conditions are of concern in determining fire behavior and in suppression efforts.

## Natural Role of Fire

Fire has always played an integral part in the creation of the forest environment in the Pacific Northwest (Agee 1981). It is an agent of change in the forest ecosystem (Omi and Laven 1982). The degree of change caused by fire is dependent upon the intensity and duration of the fire, the frequency of occurrence, and the size of the area burned.

The natural role of fire (pre-1800s) in the area along the recreation section of the Rogue River has historically been that of a low-severity fire regime. A low-severity fire regime is characterized as frequent (1-25 years) fires of low intensity (Agee 1990). These frequent, low intensity fires burn off surface litter and fuel and small understory vegetation. The overstory vegetation experiences little mortality. This periodic removal of surface and understory fuel prevents fuel build up and prevents fires from burning at high intensity even under severe fire weather conditions. This keeps the sites open and the overstory predominately in a mature stage at a landscape level.

From the mid-1800s through the early 1900s, white settlers had a large impact on the frequency of wildfire. During this period, fire was used by trappers, miners, ranchers, and settlers to eliminate vegetation, drive game, enhance forage, and clear land (Atzet, Wheeler and Gripp 1988). These frequent low-intensity surface fires eliminated much of the natural fuel accumulations and understory vegetation. Earlier fire suppression programs (around 1910) created a relatively fire-free condition. As a result of fire exclusion, natural species composition is changing and the fuel complex is becoming more flammable.



## Wildfire Prevention

Fire protection and suppression in the planning area, as with all BLM-administered lands, are accomplished through a contract with the Oregon Department of Forestry (ODF).

The wildfire prevention program specific to the Hellgate Recreation Area has five parts: public contacts, patrol, sign posting, powerline inspection, and regulated use closures.

**Public Contact** - The engine crew would make contact with all campers outside of the designated campgrounds and with as many people as possible inside camping areas. A children's program at Indian Mary Campground discusses fire prevention.

**Patrol** - The engine crew would patrol and make public contacts from Hog Creek to the Grave Creek bridge.

**Sign Posting** - Fire prevention signs and regulations are posted at all heavy day-use areas and camping locations.

**Powerline Inspection** - Conducted daily along PP&L powerlines near the recreation section.

**Regulated Use Closures** - Three stages of restricted-use closures are authorized under Oregon law OR477.545. These are put into affect at the discretion of the State Forester when it is determined necessary to prevent danger to life and property. The first level requires entrants into designated areas to comply with requirements as set forth in the regulated use closures. The second level allows entry into an area by permit only and with certain requirements. The third level is an absolute closure of the area to all forms of use. The first level is the only level that has been used in the recreation area. This regulated use allows campfires only in areas maintained and designated as overnight camping areas by the Josephine County Parks Department. Smoking is permitted only in designated areas and between the river and the high water mark.

## Wildfire Suppression

The current procedure for wildfire suppression is for the ODF to immediately notify the BLM of a fire in the recreation area. The ODF response is an automatic dispatch of five engines and a Forest Protection Supervisor. At a higher level of fire danger (a burning index of 70 or above) a helicopter with repelling fire fighters may be included in initial attack if the fire location is inaccessible. In extreme fire danger, air tankers will be considered for initial attack. The BLM will send a representative to function as a project inspector to administer the contact. A BLM environmental specialist may also be assigned to the fire to advise the ODF on BLM resource objectives. The resource objectives for the recreation area would be to minimize damage to soils, watersheds, scenic values, and wildlife habitat.

## Fuels Management

Currently, there is not a fuels management plan for the Hellgate Recreation Area. The need exists to identify areas of high fire hazard and risk and to formulate hazard abatement treatment alternatives. This type of assessment is currently being conducted on the wild section of the Rogue River. The use of prescribed fire is being considered to reduce the potential for a large wildfire with stand replacement type intensities. The prescribed fires would be low intensity surface fires that would mimic natural fires of the pre-fire suppression era.



# Soils

The area along the recreation section of the Rogue River is characterized by steep mountains encompassing a narrow river valley. Mountain slopes are long and generally dissected. The mountains are made up of altered volcanic and sedimentary rock and intrusive igneous rock. The layered rocks have been steeply folded, faulted, and in places intruded by granitic rock and peridotite, much of which has been altered to serpentine.

The river valley consists of flood plains, terraces, alluvial fans, and hills. The flood plains are mainly narrow but do broaden out in some areas, particularly from the mouth of the Applegate River to Robertson Bridge. The terraces are broad, nearly level areas of water-deposited material. The alluvial fans are gently sloping areas at the mouths of the streams and draws. These areas may receive deposits during periods of heavy rains. Low-lying hills adjacent to the river are remnants of larger landscapes that have been eroded.

Soils immediately adjacent to the river are deep and well-drained on most flood plains and lower river terraces. These soils formed in recent mixed alluvium and generally range inslope from 0 to 3 percent. Typical soil series found on these landscapes are Newberg, Camas, and Evans. Textures of the soils found immediately adjacent to the river are fine sandy loam, gravelly sandy loam, and loam.

Soils on the higher river terraces and alluvial fans are mainly deep and well drained. These soils formed in alluvium and colluvium that weathered from altered sedimentary and extrusive igneous parent material. Slopes range from 2 to 25 percent. Typical soil series found on this landscape are Takilma, Kerby, and Abegg. Textures of the soils found in these areas are cobbly loam, gravelly loam, and loam. Erosion potential for these soils is moderate.

Along the steep narrow river canyons and mountainous area adjacent to the river, the soils are shallow to deep, well drained, and somewhat excessively well drained. The soils on these landscapes were formed in alluvium and colluvium and range in slope from 10 to 75 percent. Typical soil series found on this landscape are Speaker, Beekman, and Vermisa. Textures of these soils range from extremely gravelly loam to loam.

Approximately 95 percent of the banks are considered stable and consist of bedrock outcrops or stable alluvium. There are a few banks in the 27-mile reach that, locally, are highly eroded and continue to be erosion prone. An estimated 0.4 miles out of 53.7 total miles of riverbanks are in this severe erosion category. An additional 2.0 miles of the 53.7 total miles of riverbanks show some local erosion that is limited rather than severe (Klingeman 1993). Riverbanks that fall into the severe and limited erosion category are considered to be erosion sensitive areas. These areas make up approximately five percent of the total riverbank areas.

# Water Resources

The Rogue River basin encompasses approximately 5,160 square miles. The basin is roughly rectangular in shape, extending approximately 110 miles east and west and 60 miles north and south. It includes nearly all of Jackson and Josephine counties and small portions of Curry, Douglas, Klamath, and Coos counties. Major tributaries include the Applegate and Illinois rivers. Some tributaries have headwaters in Siskiyou and Del Norte counties in northern California. The BLM recreation section encompasses approximately 27 miles from the mouth of the Applegate River to the mouth of Grave Creek.

Approximately 90 percent of the landscape is covered by forest, while the remainder of the area is used for agricultural purposes.



## Water Quality

The overall goal of the Clean Water Act (33 U.S.C.466 et seq.) is to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters” in order to protect the many important and beneficial uses of those waters. Two of those beneficial uses are aquatic habitat for fish and water recreation activities. Because these two uses require very clean water, the maintenance of water quality for these uses generally assures the protection of all the other beneficial uses. Section 101 of the Federal Clean Water Act, as amended by the Water Quality Act of 1987, declares: “It is the national policy that programs for the control of nonpoint sources of pollution be developed and implemented in an expeditious manner so as to enable the goals of this act to be met through the control of both point and nonpoint sources of pollution.”

The new section 319 of the Clean Water Act requires each state to “identify those waters within the state which, without additional action to control nonpoint sources of pollution, cannot reasonably be expected to attain or maintain applicable water quality standards or the goals and requirements of this act.”

The Clean Water Act directs federal agencies to comply with state water quality requirements to restore and maintain quality necessary to protect identified beneficial uses. BLM is the designated management agency charged with implementing and enforcing natural resource management programs for the protection of water quality on lands under its jurisdiction. A memorandum of agreement (MOA) between BLM and ODEQ, signed in 1989, delineates BLM’s responsibilities and activities concerning implementation of Oregon’s nonpoint source pollution control program. The MOA recognizes that nonpoint source water quality problems are best controlled through the development, adoption, and implementation of sound resource management practices, referred to as best management practices (BMPs). The BLM implements resource management practices that equal the state’s BMPs for controlling nonpoint source pollution.

Water quality in streams on BLM-administered lands in the Rogue River basin is generally good and supports a variety of beneficial uses. The principal water quality concerns are above-optimum water temperatures for salmon and trout in the summer and high turbidity during major winter storms.

Random collection of temperature data on hot summer days from fish-bearing tributary streams in the Rogue basin reflects water temperatures that exceed quality criteria. These water temperatures can be attributed to a combination of factors including: low summer flows, water withdrawals, wide channels, stream orientation, geology, and lack of streamside vegetation. The maximum river temperature reported at Gold Ray Dam since the full operation of Lost Creek Lake (February 1977) was 20 degrees C (approximately 71 degrees F) on July 3, 1981. During the low flow months of July and August, river temperatures are not conducive to many aquatics, especially the salmonids.

Water clarity is the most visible sign of water quality and reveals if there is a high concentration of suspended sediments. Sediment concentrations and resultant turbidity are the water quality attributes most readily and frequently influenced by natural events and human activity. Forestry practices outside of the planning area may influence the amount of sediments entering the tributary streams.

Roads outside of the planning area continue to be a major source of tributary stream sedimentation, although improved methods for design, location, and construction have greatly reduced sedimentation from this source.

The state criterion for the Rogue basin is to allow no more than a 10 percent cumulative increase in natural stream turbidity from a control point immediately upstream from the turbidity-causing activity. Currently, no state standards exist for suspended sediments. Water monitoring for turbidity upstream and downstream from several harvest units during the 1980s did not show any violation of the turbidity criterion.



## Water Quantity

Stream flow fluctuates with seasonal variation in precipitation. Approximately 80 to 90 percent of annual water yield in the Rogue basin occurs during the 6-month period from December through May. Runoff during this period varies from small increases in stream flow to major floods. Precipitation, water yield, and stream flow vary across the basin.

The summer low flow period occurs from July through October and reflects the low rainfall during this period. Below normal precipitation in the Rogue basin from 1985 through 1992 has contributed to extremes in low flows. Watersheds without regulated stream flows experience very low summer flows. The Oregon Water Resources Department recognizes water supplies are inadequate in many areas during time of need. The time of greatest water need occurs during the summer months when water is in high demand for irrigation, recreation, domestic use, road construction, and power generation. This is also the time of lowest water yield.

The Lost Creek Dam began to control the flow of water from the upper portion of the basin in 1978. Statistics from 1978 through 1993 show the annual mean flow as being 3,108 cubic feet per second (cfs). The highest annual mean flow was 5,276 cfs in 1984, while the lowest annual mean flow was 1,538 cfs in 1992. The highest daily mean flow occurred on February 18, 1983, at 50,400 cfs while the lowest daily mean flow occurred on October 8, 1992, at 876 cfs. There were 33 consecutive days in 1992 when the river level was at 1,050 cfs or less (July 9-August 10).

Although Lost Creek Dam controls the timing and amount of water released into the river on a daily basis, seasonal precipitation determines the amount of water available to be released annually. Withdrawals for agricultural and domestic use affect river flows during the naturally low flow periods. The concern over anadromous fisheries prompted the U.S. Army Corps of Engineers to adjust the water release schedule in 1994. Although statistics are not available, there is an effort to release more water when air temperature predictions indicate that water temperatures in the lower portion of the Rogue River will be above lethal levels for anadromous fish when annual migrations occur. Raising river flows during the migration periods could mean lowering flows during nonmigration periods, depending on the level of water stored behind the dam. As a result of this flow adjustment, some river users may be adversely affected, especially in years of extremely low precipitation.

# Riparian Areas, Wetlands, and Flood Plains

## Riparian Areas

These areas are land directly influenced by permanent water. They have visible vegetation or physical characteristics reflective of permanent water influence. Lakeshores and streambanks are typical riparian areas. Along the recreation section of the Rogue River, the riparian area is the strip of land along the river banks where the vegetation type and abundance is directly influenced by the water.

The riparian areas along the river vary in condition depending on the characteristics of the riverbanks. Much of the riverbanks consist of alluviated cobbles, gravels, and sand that gently slope away from the river. Vegetation on these sites consists of black cottonwood, Oregon Ash, and willow. The ground covers in these areas are primarily annual grasses and forbs. The other main type of riverbank noted is where the river has cut into the lower river terraces resulting in steep cutbanks nearly eight feet high. The cutbanks are often covered with wild blackberries or young willow stands. This riverbank type is very susceptible to erosion and is a main contributor to direct sedimentation into the river. Above the immediate riverbanks and along the lower river terraces, the riparian areas consist of riverwash and sandy loam soils that have a hardwood/conifer vegetative type with some annual grasses and forbs.



## Wetlands

These areas are inundated or saturated by surface or ground water at a frequency and duration sufficient to support vegetation typically adapted for life in saturated soil conditions. Wetlands include marshes, shallows, swamps, lake shores, bogs, muskegs, wet meadows, estuaries, and riparian areas.

Wetlands identified along the river are Flanagan Slough, Kern Slough, and an area near Whitehorse Park. These wetlands are relatively small in area, ranging from one to three acres.

High winter flows contribute to the structure and condition of these wetland areas. Most of the wetland areas have been neglected in the past or impacted by human activities, such as mining or recreation access sites. Some are being reduced in size as low river flows diminish water supplies.

### Riparian-Wetland Areas

These are areas of vegetation that border the Rogue River. When a riparian-wetland area is healthy and functioning, its vegetation contributes to improved water quality and the removal of sediment. In addition, riparian-wetland areas aid in rebuilding flood plains and reduce erosion of streambanks by acting as a sponge to hold water, which is then released slowly. This process not only offsets erosion but maintains instream biota and improves ground water reserves.

There are approximately 900 acres of riparian-wetlands along the Hellgate recreation area of the Rogue River. Most of these are contained in riparian areas along the banks and flood plains of the river.

A healthy riparian-wetland area provides water and soil that increase vegetative growth for a more productive animal community. It supports a diversity of insect, mollusk, and crustacean species that are key resources in the food chain. A healthy riparian-wetland area provides fish clean, cool water by supplying shade under overhanging banks and woody debris. Much of the vegetative matter is a primary or secondary food source not only for fish but for other aquatic life on which fish feed.

For birds, a healthy riparian-wetland area provides food, cover, and nesting sites during critical periods in their life cycle. It provides migratory routes for many waterfowl and other bird species. Other wildlife species depend on riparian-wetlands for food, water, and relief from extreme temperatures.

People benefit from healthy riparian-wetland areas as they provide recreationists with cool shade and scenery while accommodating a variety of fishing, water sports, picnicking, and camping. Many water users benefit from the improved water quality the riparian-wetland areas provide. The areas have been around for many years, thus they contain important archeological and cultural resources. Perhaps most importantly, these riparian-wetlands allow for environmental education and scientific research on the most productive, sensitive, diverse, and often geographically-limited ecosystems on public land.

Lack of flood conditions have allowed the riparian vegetation to become well established along most of the river. The construction of dams and the drought in the 1980s and early 90s are responsible for the absence of flooding along the river in the past 10 years.

### Flood Plains

These areas are the lands along a river that would be inundated with water during a flood. Flood plains function to temporarily store floodwaters, thereby reducing the risk of downstream flooding. These areas also provide safer slackwater habitat for fish during high flows. Flood plain characteristics that reduce stream velocity are standing and downed trees and other vegetation that



create a rough flood plain surface. The flood plains along the recreation section of the Rogue River exhibit the afore-mentioned characteristics and are classified as being in good condition.

There have been two major floods along the recreation section of the Rogue River within the last 130 years. The last major flood occurred in 1964; the worse flood on record occurred in 1861. Statistics show that in any year there is approximately a 2 percent chance of another flood as large as that of December 1964. The chance of a flood such as that of 1861 is estimated to be approximately 1 percent in any one year. It must be noted that: (1) floods larger than the one in 1861 could occur, (2) major floods could occur in two or more consecutive years, and (3) more than one major flood could occur in any one year.

Executive Order No. 11988 requires that the BLM take action to reduce the risk of flood loss; to minimize the impacts of floods on human safety, health, and welfare; and to restore and preserve the natural and beneficial values served by flood plains. Although, the chance of having a flood of the magnitude of the 1964 flood has been somewhat reduced due to the construction of the Lost Creek and Applegate dams, the potential for future damages are not necessarily reduced. More and more people are moving into the flood plains and it is unlikely that it will be either economically or physically possible to build flood control devices adequate to protect all of the areas that could be developed for residential, commercial, or industrial use.

# Fisheries

## Populations

The Grants Pass (Grants Pass to the confluence of the Applegate River) and the Applegate and Dunn reaches are the three major river reaches in the planning area. Populations trends of fall chinook originating from the mainstem Rogue River have fluctuated; however, they have increased over the decades. The average fall chinook population prior to 1991 was 45,000 fish annually in the Rogue River. Fourteen percent of the population occurs in the planning area. The overall fluctuation in the Rogue River population is from 4,000 to 95,000 annually. This trend may indicate that the planning area population fluctuates as well (ODFW 1994).

The period between October 1 (sometimes September 15) and April 30 is critical for adult spawning fall chinook, eggs, and fry near the redds.

The Hellgate Recreation Area is a migration corridor for salmonids. Fall chinook and steelhead are the primary salmonids using the area. Other salmonids, such as coho salmon and trout, migrate and spawn in tributaries of the Rogue River. Fall chinook habitat is in good condition. Dams located upstream have not significantly affected the downstream habitat and have improved riverine water temperature, especially for migrating spring chinook salmon (see Figure 3-6).

A general assumption is that the level of visitor use and watercraft use (above the 1991 level) may produce significant fish mortality. Adult spawning could be affected from increased bank and boat angling and private motorized boats. The assumption is also based on motorized tour boat operation from May 1 to September 30. It is speculated that increased MTB use may have significant adverse effects on juvenile salmonids (notwithstanding past research results of MTB effects on juveniles) if operations were different than the 1991 levels and time of operation. Additional research may be required if the number of MTBs increases substantially or if the period of operation changes.

Float craft can produce adverse effects if the craft linger over spawning areas. Observations show this is not a problem during the winter months when float craft do not group together as they do in the summer. Float craft usually keep moving with the water flow. People in rafts tend to splash around; however, fish can avoid this slow moving action and it is not a major concern. Drift boating occurs mostly in the winter. Drift boats do not group together. The frequency of all float craft in the winter is minimal and not a concern.



## Present Salmon and Steelhead Habitat

Early European settlers trapped beaver extensively and over the decades began the reduction in numbers of coho salmon. As beaver populations decreased, so did the summer juvenile coho salmon habitat (pools and small pondings). Settlers cleared the floodplains and adjoining lands. The lands were drained and streams channelized. Stream meander was eliminated along with the connectivity of the stream with its floodplain.

In the 1900s, the number of irrigation diversions increased and water rights were over-appropriated for agricultural use. Timber harvest and forest road construction accelerated from 1960 to 1990. Both of these land-use practices decreased available habitat for coho salmon in the tributaries. Many tributaries of the Hellgate Recreation Area have intermittent flow in the late summer. Irrigation of farmlands dewateres the tributaries and prevents juvenile salmonid fish from upstream and downstream migration to seek cool water.

The combination of all these decimating factors caused a cumulative impact and consequently reduced fish numbers, especially coho salmon in tributaries to the Hellgate Recreation Area.

Life history and habitat type for spring and fall chinook salmon are nearly identical. Migrating adult spring and fall chinook salmon require a water depth of at least 0.8 feet and a water velocity less than 8 feet per second. Spawning adults utilize substrate 0.5 to 4 inches in diameter where minimum water depth is 0.8 feet and velocity is 1 to 3 feet per second (Bottom 1985). Spawning activity covers eggs with 3 to 12 inches of gravel (Bell 1986). There is relatively little suitable spawning habitat in the 14.1-river miles between Hog Creek and Grave Creek.

Juvenile chinook progressively move from areas of low water velocity over sand, silt, or small rock substrate near the stream margin to deeper, slightly faster water as they grow (Everest and Chapman 1972). Chinook juveniles follow the shoreline during emigration, primarily at night entering the ocean from July through October after less than one year of freshwater residence (Cramer et al. 1985). Spring chinook fry complete their emergence from gravel redds in the Rogue River by mid-May (Satterthwaite et al. 1992).

Wild coho salmon adults hold in the mainstem Rogue River until rainfall raises the flow of tributaries sufficient for them to enter. Several streams in the Hellgate Recreation Area (i.e., Taylor, Jump-off Joe, Limpy, and Dutcher creeks) support small runs of naturally-spawning coho salmon (MacLeod 1992). Coho primarily spawn and rear in the river's tributaries. Adults spawn in low gradient riffle areas over small gravel. Fry emerge from the gravel between late March and early June (ODFW 1991b). After hatching, most juveniles spend approximately 15 months in their natal stream, preferring pools and slack water areas associated with wood, undercut banks, and overhanging vegetation in tributaries. Migration to the Rogue and the ocean occurs during May through early July, usually peaking during early June.

Steelhead spawn primarily in the tributaries and prefer smaller substrate than chinook salmon and prefer shallow slow water at the stream margin. Summer steelhead adults and sexually mature half pounders (approximately five percent of the total annual population) enter streams to spawn from January through March. Steelhead spawn in 11 streams within the Hellgate Recreation Area. Although they favor slightly smaller streams for spawning than winter steelhead, there is considerable overlap. Many spawning streams are small and become intermittent or dry during summer.

Steelhead alevins remain in the gravel several weeks until the yolk sac is absorbed and soon after, emerge as fry. Steelhead fingerlings prefer small riffles in the tributaries and move to pools almost exclusively as streams become intermittent or when stream flow is nil during the summer. Fry emigrate from their natal streams to the mainstem Rogue River from March through July where they rear within a short distance downstream. Juveniles frequently move between the river and tributaries, especially during winter freshets, apparently to avoid turbidity and high water velocity.



The majority of wild summer-run juveniles smolt during their second year and emigrate to the ocean between April and June. The 150,000 summer-run steelhead smolts produced annually by Cole M. Rivers Hatchery (ODFW 1990a) also pass downstream through the Hellgate Recreation Area during these months.

### **Fall Chinook Spawning Areas**

Four major fall chinook spawning areas are recognized in the Hellgate Recreation Area (see Map 3-1). These areas are large in size and close to areas of high angler use. The four areas are Finley Bend, Warton Riffle, Panther Chutes, and Whitehorse Riffle, including the area at the Whitehorse boat ramp. The area by the boat ramp varies as a heavily used spawning site from year to year. Some years fall chinook may spawn heavily in a 2,000 to 3,000-square foot area. Other years, such as 1996, the gravel bars changed and little spawning occurred.

A fifth major spawning area is Eisman Stillwater. This area is immediately upstream from the top of the Hellgate Recreation Area, yet is very much influenced by any regulations enforced in the area. Other spawning areas include: Applegate Riffle, Brushy Chutes, lower Banfield Chute, Robertson's Riffle, High Banks Riffle, Peach Riffle, Pickett Riffle, Two-Bit Riffle, and Jump-off Joe Riffle.

### **Threatened and Endangered Species**

Depleted stocks of salmon, especially coho, prompted the Pacific Fishery Management Council to prohibit all ocean fishing for salmon in 1994 along the Washington and northern Oregon coasts and banned all coho fishing. In 1995 and 1996, coho fishing was again banned and ocean fishing for other salmon was open, but the allowable catch was severely restricted compared to historic levels.

In 1993, the National Marine Fisheries Service received petitions to list Southern Oregon/Northern California (SONC) coastal coho under the Endangered Species Act. The National Marine Fisheries Service conducted status reviews (i.e., California, Oregon, and Washington) to determine if listing was warranted. Essential elements of the status reviews included: (1) delineating possible distinct population segments of these species, (2) using available scientific and commercial data to assess viabilities of population segments under present conditions, and (3) determining if listings are warranted.

The National Marine Fisheries Service listed wild coho salmon as a threatened species on May 1, 1997. The Southern Oregon/Northern California Coastal (SONCC) chinook salmon and critical habitat were proposed for listing under the ESA on March 9, 1998 (63 FR 11482).

The Oregon Fish and Wildlife Commission determined on February 22, 1995 that, coho salmon would be classified as a State-sensitive species. The Commission concluded coho production capability was not in peril. Further direction by the Commission instructs the Department of Fish and Wildlife to assess coho stock status annually. The State of Oregon's concern about the potential salmon and steelhead Federal listing prompted a Coastal Salmon Restoration Initiative. The Initiative resulted in a plan to conserve and restore salmon, steelhead, and cutthroat trout. The plan emphasizes voluntary rather than new regulatory approaches.

Summer steelhead in the upper Rogue River are listed by Oregon Department of Fish and Wildlife as "depressed and possibly declining and are of substantial public concern". The combined wild and hatchery run of adults over Gold Ray Dam has generally increased since the 1960s. However, wild fish in recent years comprise only approximately 40 percent of the run compared to 80 percent 20 years ago.



## Juvenile and Adult Anadromous Fish Study

Two major fisheries issues were evaluated and considered in the river planning process. The issues involved the impacts of motorized and nonmotorized boats producing an adverse impact upon: (1) spawning adult fall chinook salmon and eggs in the nest and (2) juvenile salmon and steelhead rearing and migration. The BLM currently restricts motorized boat use after October 1 for protection of spawning fall chinook and eggs in the nest. The restrictive action was prompted by interest from the public and the Oregon Department of Fish and Wildlife.

The Oregon Department of Fish and Wildlife's concerns about the impacts of motorized boats was based primarily upon the conclusions from a 1975 New Zealand field/laboratory study. This study indicated egg mortality was due to the pressure exerted downward from the boat into the spawning gravel. The BLM agreed with the scientific peer review of this study which expressed concern about the method used and conclusions from the New Zealand study.

A 1992 BLM review of the adult fish and egg issue concluded that all motorized tour boat use in the Hellgate Recreation Area of the Rogue River from the mouth of the Applegate River to Grave Creek should be restricted from October 1 to April 30 because of spawning and rearing fall chinook.

A 1988 study on a stream in Missouri demonstrated the physical impact of boats on fish nests. Conclusions from this study clearly showed a significant disturbance to river gravels at depths of 7-10 inches, from 14-foot 35hp jet and 15-foot 20hp prop boats. The study indicated a high probability of impact to any eggs in the gravels. The impact of small jet boats on eggs and gravel demonstrated in the Missouri study, reflected the high probability of causing mortality to Rogue River chinook reproduction during October. This is primarily predicated on the considerably larger size and displacement of water by Rogue River boats as compared to the smaller boats used in the previously mentioned studies. Rogue River commercial boats seat 40 or 80 passengers as compared to 3 to 5 passenger recreational boats used in the Missouri study.

In addition, the decision was based on field observations by the BLM and expert opinions from fisheries scientists from Missouri and Alaska. Representatives of the BLM invited University of Alaska scientists to conduct tests on the Rogue River regarding the pressure caused by Rogue River motorized tour boats on salmon egg nests. The BLM decided in 1993 not to study the effects of boats on adult fall chinook spawning salmon or eggs in the nests, and instead wait for the results of a motorized boat impact study on salmon adults and eggs conducted in Alaska.

Subsequently, the results of the Alaska research concluded: (1) pressure alone is not responsible for egg mortality, (2) it is the turbulence that moves gravel, and (3) it is gravel movement that kills eggs, either by impacting eggs in place or by displacing them from the redds. The conclusions in the Alaskan study regarding turbulence by small motor boats is applicable to all motor boats on the Rogue River.

The second major fisheries issue prompted another BLM review, which concluded a study should be conducted to determine the impacts of all boats on juvenile fall chinook, coho, and steelhead from May 1 to September 30. The BLM solicited peer review from fishery experts about a multi-year juvenile fish study. The study design and conclusions were reviewed by the team of experts. Based on the review, the BLM funded the Oregon Department of Fish and Wildlife to perform the research.

The research focused on: survival, stress, choice of habitat, and susceptibility to predation. The results of the research indicate juvenile anadromous salmonid survival and distribution are not significantly hindered by motorized and nonmotorized boats and major changes in boating operations is not warranted. One of the major issues was the stranding of juvenile salmonids on the shoreline. During the 1980s, public concern was expressed about the sightings of juvenile salmonids stranded on the Rogue River shoreline in the Hellgate Recreation Section due to



motorized boats. This concern was addressed in the juvenile fish study, which determined there was no juvenile salmon or steelhead stranding caused from motor boats. Mostly non-native crayfish were found stranded in low numbers on the shoreline of the Hellgate Recreation Section.

# Wildlife

## Habitat

Wildlife habitats along the Rogue River are divided by land form into two major areas: the lands up river from Hog Creek and the lands down river from Hog Creek. Robertson Bridge to Hellgate is the transition point from the flat alluvial plain of the upper river agricultural environment to the lower river's canyon walls and more native environment. Changes in wildlife are evident between the two sections, with black bear and heron rookeries associated with the more natural, undisturbed habitats which are more likely to occur below Robertson Bridge.

The habitats that exist up river from Hog Creek are located on a broad flood plain that was extensively used for agriculture in the recent past. After the 1968 designation of the BLM-administered National Wild and Scenic Rogue River, land and scenic easements were purchased to protect its natural and scenic qualities. As a result, existing riparian habitats associated with the flood plain of the river were protected from development, and lands once used for agriculture were allowed to revert to a more natural condition. Mesic sites are now vegetated with black cottonwood, willow, and blackberries; the dryer sites are dominated by ponderosa pine, white oak, and non-native grass. Upslope habitats are a combination of oak woodlands and conifer forest.

Down river from Hog Creek the river canyon narrows, which in most places restricts the riparian vegetation to narrow bands immediately adjacent to the river. Rock outcrops and cliffs become more prominent and canyon live oak is a dominant species on the poorer soils. The less steep sites with better soils are vegetated with Douglas-fir, similar to the upslope vegetation up river from Hog Creek.

The following sites have been identified as providing habitat for a wide variety of species or for species of special interest: Applegate Landing Area, Finley Bend Hayfield, Griffin Lane Complex, Flanagan Slough and Robertson Bridge Land. Most of the habitat in the area from Hellgate Canyon down to the confluence of Grave Creek consists of steep canyon walls vegetated with Douglas-fir and canyon live oak. Photos taken in this area indicate that vegetative communities have changed little since the early 1900s. These vegetative communities provide habitat for a variety of species (e.g., turkey vultures, ringtail cats, cliff swallows, black-tailed deer, black bear, osprey, bald eagles, and spotted owls).

A detailed description of habitats that exist along the Rogue River and its associated uplands is contained in the Rogue National Wild and Scenic River Wildlife Habitat Management Plan, Appendix H. Several of the habitats listed in the wildlife plan have changed as a result of the actions prescribed by the plan or as a result of natural succession.

As recommended in the management plan, the Robertson Bridge peach orchard was removed, seeded, and converted to non-irrigated pasture/grassland. In the wildlife plan, the vegetation groups listed as non-irrigated pasture/grassland are continuing along a successional pattern which will eventually return them to their climax community. These areas are now dominated by grasses and young ponderosa pine trees. Many of these pine trees are now 6 to 20 feet tall and the stands are progressing toward a pine/grass vegetative community that was probably present prior to European settlement in the area.

Since implementation of the management plan, other changes have resulted from a lack of floods and the elimination of cattle grazing which traditionally removed much of the understory



vegetation in these stands. As a result, much of the understory vegetation is now dominated by Himalayan blackberry. Even though most of the changes that have occurred are minor, the introduction of the Himalayan blackberry has the potential to change many of the existing habitats and result in a reduction of diversity in the area. The aggressive nature of the blackberry, combined with the lack of control, has allowed it to expand into many of the open grassland, black cottonwood, and willow communities.

In January 1997, the area experienced a 100-year flood. The vegetation was in excellent condition and effectively protected the lands from erosion and other major damage. The flood waters deposited new soil over much of the floodplain which resulted in lush growth of vegetation during the spring of 1997. As a result of the newly deposited rich soil, the blackberry responded with a surge of growth covering more area than prior to the flood. Consequently, the flood alone did very little to control the blackberry in the area.

In general, the one-quarter mile corridor of the Hellgate Recreation Area section is exposed to recreational associated sound intrusion (disturbance), including motorized tour boats, private motorized boats, oar powered boats, hikers, boaters, and anglers. Much of the research conducted to determine the degree of disturbance created by human-generated noise and harassment has been related to off-highway vehicle (OHV) use and people hiking on trails.

The noise and disturbance created by OHVs would be equivalent to those created by motorized boats. Disturbance created by hikers would be equivalent to oar-powered rafts and boats. In one study, a comparison of eight paired sites demonstrated that OHV use areas have significantly fewer species of vertebrates, reduced numbers of individuals, and lower reptile and small mammal biomass. Censuses also showed decreased diversity, density, and biomass estimates of breeding birds in areas used by OHVs (Bury 1977; Berry 1980).

## **Threatened or Endangered Species**

Threatened or endangered species are those species listed under the Endangered Species Act (1973 et seq.), as amended (ESA). Listings of threatened and endangered species carry federal mandates for protection through the use of recovery plans and consultation with the U.S. Fish and Wildlife Service (USFWS) prior to any action that may effect a species or its habitat.

Within the Hellgate Recreation Area, the existing habitats are associated with three species listed as threatened. Species listed as threatened under the Endangered Species Act are the bald eagle, the northern spotted owl, and the marbled murrelet.

### **Bald Eagles**

The Pacific Bald Eagle Recovery Plan identifies tasks needed to achieve recovery throughout the Pacific recovery area. At least two recovery management recommendations apply to the Hellgate Recreation Area and they are as follows: 1) 1.33 Restrict Human Disturbance at Eagle Use Area (Priority 1) and 2) 1.334 Prohibit Vehicle Traffic at Sensitive Key Areas During Periods of Eagle Use.

Bald eagles use the large conifers along the river for roosting, nesting and foraging. Currently, there are two known bald eagle nests associated with the recreation section. Although these two nests are located outside the .25 mile river corridor, it is likely that both pairs extensively utilize the river for foraging during both the winter and summer months.

Optimum sites for foraging possess the following attributes: large trees for perching, slack water and large gravel bars. Some suitable foraging sites along the Hellgate Recreation Area include: Rocky Bar, Chair Riffle, Upper Ennis, Stratton Creek, Flanagan Slough, Carpenters Island, Griffin Lane Complex, Finley Bend and Applegate Landing.



During several reproductive seasons, adult bald eagle pairs have been observed within the planning area in the following locations: Galice, Ennis Riffle, Robertson Bridge, and Centennial Gulch. It is suspected that these birds may represent nesting pairs; however, previous surveys have failed to document nests associated with these pairs. Additional surveys would be required to determine the presence of other bald eagle nest sites within the area.

Bald eagles forage primarily during the early morning and late afternoon, but will forage opportunistically throughout the day. Some research indicates that the early morning hours are particularly critical foraging (Anthony, Isaacs and McGarigal 1991). For foraging, bald eagles are strongly associated with river corridors and shorelines where they feed on both fish and waterfowl. Chinook salmon return annually to the river to spawn, and consequently die, providing a consistent food source for the eagles during the summer and fall months. Due to this consistent food source, additional bald eagles typically move into this section of the river during the winter months.

### **Northern Spotted Owls**

Northern spotted owls are found in old-growth conifer habitats similar to those located within the corridor and associated viewshed of the recreational area. Douglas-fir forest, hardwood/conifer forest, and canyon live oak/Douglas-fir all have the potential to provide spotted owl nesting, roosting, or foraging habitat. Approximately 3,675 acres of these combined habitats occur in the river corridor. There are no known spotted owl nest sites located within the river corridor. However, spotted owls are a wide-ranging species, which undoubtedly utilize the .25 mile river corridor of the Hellgate Recreation Area for foraging, roosting and dispersal.

### **Marbled Murrelets**

Marbled murrelets are small sea birds that use large old-growth trees for nesting. Suitable nesting habitat requires large limbs (six inches or greater in diameter) that are moss covered or provide a platform for a nest.

Currently, the USFWS considers any old-growth conifer habitat within 50 miles of the coast to be suitable habitat. The entire recreation section of the Rogue River is within this 50-mile zone. According to the August 1, 1996 programmatic Biological Assessment (USDA & USDI 1996), the area included in the recreation section of the Rogue River is within Marbled Murrelet Area D, where there are no seasonal or daily operating restrictions for projects that result in disturbance only. This recommendation is based on the low likelihood of marbled murrelets occupying the zone defined as Area D.

Limited surveys for marbled murrelets have been conducted along the Rogue River by the U.S. Forest Service and the BLM. Areas surveyed include the section from near the mouth of the Rogue River to Grants Pass. Marbled murrelets were found along the river to an area just west of the town of Agness. No murrelets have been found upriver from this point and no marbled murrelets have been detected on the BLM Medford District.

## **Special Status Species**

A large group of species have been identified by the USFWS, the BLM, or the State of Oregon as having special status. Under the special status designation, there is no legal mandate requiring protection. Current BLM Policy, 6840, states the Bureau will not implement any actions that will result in a sensitive species being listed as threatened or endangered under the Endangered Species Act (1973 et seq.) as amended. There is a wide variety of special status species present in the planning area (see Tables 3-2 and 3-3).

Species having potential for listing under the ESA are identified by the USFWS as Federal Candidate Species. Category I species are those identified as having potential for listing, but that



have not undergone the official process. Recent changes implemented by the USFWS have eliminated the Category II species list. Most of the species previously listed as Category II have been adopted by the BLM as sensitive species. There are no Category I wildlife species present in the planning area.

### **Peregrine Falcons**

Peregrine falcons were previously listed as federally endangered. On August 25, 1999, they were delisted and are state threatened and BLM sensitive. Peregrine falcons nest on large rock outcrops and cliffs. Most of the suitable nesting habitat for these birds is located in the lower recreation section below Argo Riffle. Although there are no known nest sites in the recreation area, there are nest sites located nearby in the wild section of the river. Peregrine falcons feed primarily on passerine birds and take a wide array of other birds, including waterfowl and woodpeckers. The diverse habitats along the Hellgate Recreation Area provide an abundance of small- to medium-sized prey for peregrine falcons. Because peregrine falcons are a wide-ranging species, they undoubtedly use the recreation section of the river and associated corridor for foraging.

### **Mammals**

Townsend's big-eared bat roost and reproduce in caves, mines, and large open spaces in buildings such as barns or attics. These roost sites are required for winter hibernation and summer maternity colonies. Because Townsend's big-eared bats often form large colonies at their roost sites, they are particularly vulnerable to human disturbance. Compounding the impacts associated with disturbance, Townsend's big-eared bats are extremely sensitive and will abandon roosts if recreation associated disturbance becomes excessive.

There are several abandoned mine adits within the planning area. One of these mine adits is confirmed as a summer roost for several bat species including the Townsend's big-eared bat. Monitoring of this mine adit indicates that it receives frequent visitation from humans.

Under the Northwest Forest Plan, the following bat species were elevated to BLM sensitive species and survey and manage species: long-legged myotis, long-eared myotis, fringed myotis, yuma myotis, silver-haired bat, and pallid bat. These bat species roost in a variety of habitats, including caves, mines, buildings, tree cavities, tree foliage, loose bark, cracks and crevices. For these bat species, the planning area provides roosting, reproductive and forage habitats in the rocky canyons, open water areas, and associated forest. If present, all of the above bat species may use the river as a source of water and as a foraging area.

### **Reptiles and Amphibians**

The western pond turtle, California mountain king snake, common king snake, and the northern sagebrush lizard are the special status reptiles that are currently known to exist in the planning area.

In 1993, the USFWS was petitioned to list the western pond turtle as a threatened or endangered species; however, the listing was denied due to inconclusive information regarding the species. Western pond turtle populations are thought to be declining over much of their range. In part, this decline can be attributed to the introduction of bull frogs and large mouth bass, which prey on young turtles.

Western pond turtles inhabit the slow or slack water areas of the river and can often be observed sunning themselves on partially submerged vegetation and logs. Reproduction or egg laying occurs on sunny south slopes in clay soils well away from the water. Literature indicates that generally, nests sites are between 10 and 70 meters from water (Holland 1991). Young turtles hatch and winter in the actual nest, emerging from it the following spring to migrate back to water. Predation on turtle nests by raccoons has been verified as a problem in several areas and is likely to occur locally as well. However, extensive data is unavailable on the Rogue River population of pond turtles.



West of the Cascades, populations of northern sagebrush lizards are disjunct and widely scattered. On the Grants Pass Resource Area, small populations exist in areas of serpentine soils and its associated vegetation. East of the Cascades, habitat loss from over-grazing by livestock is the major problem facing this species. On the recreation section of the Rogue River, northern sagebrush lizard habitat is no longer grazed, and the habitat on serpentine soils seems to be self-sustaining. However, the lack of fire may allow some of the brush habitats to proceed through natural succession, resulting in unsuitable habitat and a loss of available habitat for this species.

Special status amphibians are the yellow-legged frog and Del Norte salamander. Yellow legged frogs are most often found in the smaller side streams with perennial flows of clear, cold water or in pools that have a connection to the main flow of the stream. These frogs are sensitive to water quality problems including increased water temperature and siltation. Road building, mining, timber harvest, and increased ultra-violet radiation have all contributed to population declines and designation of the yellow legged frog as a special status species.

Del Norte salamanders live in talus slopes under closed canopy forests. These salamanders are part of the Plethodon, or lungless salamander family, and transpire through their skin. As a result, they are very sensitive to temperature and humidity changes. Del Norte salamanders are commonly found in areas of generally deep talus. Deep talus allows the animals to migrate up and down through the substrate as weather conditions change. Rocky canyon areas down river from the Hellgate Canyon area have an abundance of this type of habitat. Most of this area has not been surveyed for the Del Norte salamander, but the habitat appears to be suitable.

## Other Species

### Raptors

The northern goshawk is a large raptor that utilizes mature and old-growth forests as habitat. Goshawks are rare in this portion of the state, but have been observed in the planning area. Goshawk do not often stray into open areas; they prefer to stay under the forest canopy where they forage on birds and small mammals.

Osprey are common along the Hellgate Recreation Area. Osprey are of interest to river users because they provide wildlife viewing and photo opportunities. Osprey and their nests are regular stops for guided trips.

From 1978 through 1994, osprey have been monitored on the Hellgate Recreation Area of the Rogue River. Initial surveys in 1978 documented five active nest sites (see Rogue National Wild and Scenic River Wildlife Habitat Management Plan, Appendix L). Surveys conducted every three years since 1978 have shown a steady increase in active osprey nests. The latest survey conducted in 1994 located more than 40 active nest sites in the planning area (Map 3-2), although the overall increase of osprey is unknown. Nest locations and numbers change from year to year; actual locations and number may be considerably different now.

Some of the increase in documented osprey nest sites can be attributed to an improved survey technique. Helicopters were used in the later surveys, allowing detection of sites that were farther from the river or well hidden; although, the largest increase in nest numbers has been located adjacent to or within full view of the river. Increased osprey numbers can also be attributed to the banning of DDT. Recovery may have been even greater had the river been free from disturbance.

Osprey return to southern Oregon in March, at which time they begin courtship and nest building/repair. Young birds usually hatch in May and June. Adults forage primarily on the river to provide food for two to four chicks. Young birds fledge in late July through August. After fledging, the young birds learn to forage for themselves along the river.



## **Wading Birds**

Great blue herons have been identified for nest site protection (USDI 1995). Great blue herons nest communally in both deciduous and conifer trees, usually close to water. These communal groups, called rookeries, vary in number from two to more than 100 nests. Herons start nesting in late February; young hatch in April and May and fledge in July.

Great blue herons forage primarily at dusk and dawn, but will forage opportunistically during all day and night hours. Adults feed fish to their young, which they catch from areas close to the nest. The farther great blue herons are from the foraging area, the less efficient they become at feeding their young. This can lead to reduced productivity. Young fledglings also learn foraging skills along stream habitats close to their rookeries.

Some great blue heron rookeries were last surveyed in 1997, and the others were surveyed in 1994 by the Oregon Department of Fish and Wildlife (see Table 3-3). Historic sites that have been abandoned for many years may not have been included in the 1997 surveys. Over time, as many as ten rookeries have been monitored (see Map 3-2).

## **Gallinaceous Birds**

As a result of population declines in the eastern portion of its range, the mountain quail is a special status species; however, mountain quail are locally abundant and are still hunted as a game bird in this portion of the state. Mountain quail prefer brush fields, a habitat that is widespread in the planning area.

## **Passerine Birds**

Western blue birds are secondary cavity nesters and forage primarily over meadows. For nesting, they utilize cavities created by woodpeckers. Both nesting habitat (snags with cavities) and meadow habitat have been lost as a result of logging, fire suppression, and residential development. As a result, there has been a decline in the number of western blue birds. Several natural meadows and many old agricultural fields provide habitat for this species.

## **Woodpeckers**

The pileated woodpecker, Lewis woodpecker, acorn woodpecker, and Williams sapsucker are all dependent on trees with some level of heartwood decay that allows for the construction of cavities for nesting and roosting. Habitat loss as a result of logging has led to a decline in the populations of the pileated woodpecker and Williams sapsucker. The oak woodland areas that are the primary habitat of the acorn woodpecker and Lewis woodpeckers have been destroyed or replaced by residential and agricultural developments or fire suppression. The lower elevation areas along the Hellgate section provide oak woodland habitat and the riparian areas provide abundant cavity nesting opportunities.

## **Neotropical Birds**

Neotropical birds are not listed as special status species, but they are included in this discussion because of widespread concern regarding downward trends in populations and associated habitat.

Neotropical birds are species that breed and raise their young in the U.S. and Canada and then migrate to Mexico, Central and South America for the winter. Species decline is attributed to habitat destruction in both breeding grounds and wintering areas. Most of the monitoring data has come from breeding bird surveys conducted by the National Biological Survey.

A request for additional data on neotropical birds has resulted in the initiation of several new surveys at the local level. One such local survey is the Monitoring Avian Production and Survivorship (MAPS) study. The MAPS stations use a standardized protocol to mist net and band



birds at designated sites. For all of the MAPS stations, the data is processed at a central location and can be used to determine the productivity and trends of individual species at both a local and regional level.

Since 1995, a MAPS station and a fall migratory banding station have been established in the riparian habitat adjacent to the Hellgate Recreation Section. In 1994, fall migratory bird banding sessions were conducted at the same site. Species diversity and density information is included in Table 3-4. Lands and scenic easements purchased to protect the outstanding qualities of the Rogue River have also protected important reproductive areas and migratory flyways for neotropical migrants and other birds that use similar habitats.

## Scenery

The scenery classification of the Hellgate Recreation Area is Class A. This rating denotes scenery that offers spectacular views of rugged topography, interesting vegetative patterns and geological features, adjacent scenery that complements the immediate view, relative scarcity of this type of scenery within the physiographic province, and a minimum amount of negative cultural modification (see Chapter 3, Natural Scenic Qualities).

The quality of scenery is affected primarily by human-made alterations to the naturally occurring landscape. New roads, dwellings, buildings of any type, timber harvest activities, or other modifications to the land alter the quality of available scenery. Natural occurrences, such as fire, drought, insect infestation, landslides, and floods, also affect scenery.

Scenery quality is subjective. Different viewers will characterize and qualify available scenery according to their individual preferences. In general, most landscape viewers seem to prefer a natural-appearing scene over one that has detectable modifications.

Dynamism is also a quality of scenery. Transient sights, sounds, and physical movements affect the viewer's perception and opinion of the overall quality of the available scene. Boat traffic, with its associated wave action, vehicle traffic, and air traffic all contribute to the viewer's perception of scenery quality.

## Motorized Boaters

The Rogue River was first traveled downstream from Grants Pass to the Pacific Ocean in 1915. The first trip upstream from the ocean to Grants Pass was made in 1947. Since that time improvements in boats, equipment, knowledge and skills, and increasing interest in river resources have supported a large expansion in activity types and numbers of visitors.

The Rogue River offers a blend of motorized boating in a setting that is unique in North America. Unlike most rivers in a back country setting, the Rogue River is accessed by different types of water craft and provides a variety of white water challenges. Recreationists commonly use the river for both motorized and nonmotorized recreation.

There are three types of power boat use on this section of the Rogue. Motorized tour boats (MTBs) make up the majority of the motorized use. Commercial motorized angling boats are limited to three outfitters. The outfitters use is very limited. Private motorized boats are not limited, but their use is not significant when compared with other uses.



## Motorized Tour Boats

There are two motorized tour boat companies; both are operated by the same individual and are under BLM-issued Special Recreation permits.

The MTBs used on this section of river are relatively large. Hull length ranges from 30 to 42 feet and hull width ranges from 11 to 14 feet (to be reduced to 36 feet by 12.5 feet after completion of the RAMP). MTBs carry 40 to 80 passengers. The boats are powered by two or three v-8 engines and they operate at speeds of 25 to 40 miles per hour. The MTBs carry 40 to 80 passengers.

Two general types of trips are provided by the operator: scenic and whitewater. The scenic trips go from Grants Pass to Hellgate Canyon and return, for a round-trip distance of 41 miles. Some of the trips include dinner or brunch at the OK Corral Restaurant. The whitewater trip starts at Grants Pass and ends at Grave Creek, for a round-trip distance of 67 miles; there is a stop at The Galice Store for meals.

By BLM regulation, the season of commercial MTB operations is currently limited to May 1st to September 30th of each year. Trips must be run between 9:00 a.m. and 8:30 p.m. (9:30 a.m.-8:30 p.m. September 1 to September 30). There is also a limit of 19 round trips per day. The trips are required to be assembled into groups or runs. There is no limit to the number of boats in each run. The typical run has from one to seven boats. One area, Hellgate Canyon, is currently designated off-plane where boats must travel at reduced speed.

The daily limit of 19 trips is reached infrequently. In 1991, there were 16 days (all on weekends) when all 19 trips were used. The typical number of trips on weekdays during the heavy use months is from 12 to 18.

Overall, motorized tour boating accounts for more on-river visitors to the recreation section than any other use. Boats feature speed, acceleration, and river guides who offer narratives about the local wildlife and cultural history. Motorized tour boats operated between Grants Pass and Hellgate Canyon until 1977 when Lost Creek Dam was completed and summer water levels generally increased. In 1977, smaller MTBs began making the trip to Grave Creek and this section has since become a part of the regular excursion operation.

A unique aspect to motorized tour boat recreation is its inherent availability for disabled, elderly, or any other user group who may not be capable or willing to experience the river environment through the use of other types of water craft. School, retirement, and other special interest groups commonly utilize the MTBs to experience the river. Elimination of the MTBs would impact these groups by limiting their access to the recreation resource. MTBs function as the delivery system for these groups seeking the river experience (e.g., wildlife viewing, white water scenery, cultural resources) (see Chapter 1, Legislated Requirements and Management Direction).

In 1991, there were 1,661 MTBs on the river carrying 72,856 visitors. The MTBs operated with the most efficient boat to passenger ratio.

## Private Jet Boats

Private jet boat use on this section of river is very limited. Class I to IV rapids and hidden rocks provide challenges to power boaters that do not have the requisite boating knowledge and skills. Novice boaters frequently run aground or damage equipment on rocks.

Private powerboats are used for fishing, sightseeing, and general on-river recreation. Use figures indicate that from 1992 to 1994 there were fewer than 250 private trips per year. This is approximately 3 percent of all watercraft trips.



Generally, private jet boats are used between Grants Pass and Zigzag Creek (RM 19.7), with a few using the entire study reach; most use is between Grants Pass and Robertson Bridge (RM 14.8). General float craft activity is mostly between the Hog Creek Ramp and Grave Creek. Visitor use data for 1991 indicated that 90 percent of the float craft use occurs in this section (Austermuehle 1992).

## **Demographics**

Motorized boaters visit the river for multiple recreational experiences. Overall, motorized boaters are of all ages, with a mean age of 46 years. There were more male motorized boaters (61 percent) than female (39 percent). Motorized boaters are well educated with 44 percent having earned a college degree. Twenty-four percent of the motorized boaters live within an hour's drive of the river (0-50 miles). Only 26 percent of the motorized boaters traveled more than a full day to reach the river (over 500 miles). Motorized boaters are equally as likely to reside in Josephine County (11 percent) as in Jackson County (11 percent).

## **Visitation Patterns**

Total annual recreational use levels in 1991 included approximately 36,000 visitors in various float craft and approximately 73,000 visitors in MTBs (Austermuehle 1992). Most of this use occurred from May to September, with a peak in August. Driftboat angling, another 8,000 annual visits, is tied to the timing of anadromous fish runs. Typically a peak in driftboat activity occurs in August and September timed with the fall Chinook runs. Wading and swimming typically occur at several county park access sites at very low use levels.

Motorized boaters are substantially different than either floaters or anglers in the type of trip they make to the Rogue River. The majority of motorized tour boaters (73 percent) have combined their visit with other vacation activities, indicating a multiple-day trip. Most motorized tour boaters stay at motels (44 percent), campgrounds along the river (15 percent), or with family and friends (11 percent).

Motorized boaters are frequent visitors with almost 80 percent visiting the river once a year or more. On average, motorized boaters have been visiting the river for 12 years and make five trips per year. Only 15 percent are newcomers on their first float trip. Repeat visitors report their use of the Rogue River as remaining the same or increasing (89 percent). Only 11 percent indicated that the frequency of their visits was decreasing. They use weekends and weekdays about equally, but on a visit-per-day basis the greatest numbers occur on warm summer weekends.

Approximately 65 percent anticipated making future trips about as often as in the past. The remainder either did not know what to expect (21 percent) or thought they would return less often (13 percent). These latter groups simply wanted to visit new places and felt that the Rogue River was too far from home.

Ninety-four percent of the MTB passengers take one of the trips offered in the upper section of the Hellgate Recreation Area from (Grants Pass to Hog Creek) and 66 percent take the white water trip, which goes as far as Grave Creek. There is an average of 3 people per motorized boat, which is twice the size of other groups. Motorized boaters spend an average \$145 per trip, which may indicate their use is incorporated with other vacation activities over a period of several days.

## **Motorized Boaters' Perceptions of Existing Conditions**

Motorized boaters' perceptions of ecological impacts, crowding, preferences for seeing others, encounters, user conflicts, trip satisfaction, and the problems they see all contribute to the social setting.



## **Ecological Impacts**

The major ecological impacts motorized boaters identified were water pollution and riverbank erosion.

## **Crowding**

Seventy-one percent of motorized boaters feel there is some degree of crowding, with most rating it slight (27 percent) or moderate (38 percent). Some (55 percent) feel float craft interfered with their trips, while others (32 percent) feel other jet excursion boats interfered with their trip.

## **Preferences for Seeing Others**

Companions are an important part of any recreational trip. Motorized boaters have opinions about seeing other parties on the river. More than half (56 percent) enjoy seeing others, while for 31 percent it makes no difference. Thirteen percent are bothered by seeing other parties. That a relatively low percentage are bothered by seeing others reflects the high-density, high-use experience motorized boaters have come to expect from the Hellgate Recreation Area. Most motorized boaters come to the recreation section prepared to meet other groups. This suggests there are three categories of motorized boaters: (1) those who are content with the social experience offered, (2) those who are indifferent to encounters by other parties, and (3) those who would prefer fewer on-river contacts with groups outside their user type.

## **Encounters**

Two factors that help explain why people feel crowded are their expectations about the number of people they will meet and their actual encounters. In general, motorized boaters are unable to accurately predict encounter levels; most motorized boaters are first-time users (47 percent).

Most motorized boaters do not believe that meeting more people than they expected warrants any change in their activities. Few become dissatisfied with their trip or decide to go elsewhere next time (4 percent). Others (17 percent) change the way they think about the Hellgate Recreation Area, choosing to see it as less remote. Motorized boaters on this river stretch have adapted to high density conditions, a common outcome at popular recreation areas. Rather than be disappointed, visitors alter their pre-trip expectations to be more in line with the actual conditions they find on site.

## **User Conflicts**

This description of user discord is measured by the motorized boater's perceptions of rude behavior, conflicts among users, and if other users interfered with their activities. Motorized boaters experiencing interference are primarily concerned with crowded conditions (see Table 3-5).

Visitor behavior is not considered rude by approximately 51 percent of the motorized boaters, and 33 percent feel it is a minor problem. Sixteen percent of motorized boaters feel rude behavior is either a problem or a major problem. More motorized boaters feel user conflict exists; 42 percent consider this a minor problem and 18 percent view it as more than a minor problem.

Twenty-one percent of motorized boaters feel that others interfere with their trip. Motorized boaters view floaters as the group most responsible for trip interference (55 percent); they feel their own group interferes with their own float experience.

In summary, user conflict is moderate to low for motorized boaters, with approximately half of all motorized boaters feeling that neither user conflicts nor behavior problems exist.



## **Trip Satisfaction**

Visitor-caused impacts in the Hellgate Recreation Area have not deterred motorized boaters from enjoying their activities. Most motorized boaters (86 percent) rate their experience as excellent or perfect. One percent rate their experience as poor/fair, 3 percent good, and 10 percent very good. Increased visitor use levels of all types have had little effect on user satisfaction. Rather than become discouraged, motorized boaters tend to adjust their view of the higher density situation and remain satisfied.

## **Problem Identification**

Conditions approaching problem levels were the number of jet boats, motor boat safety, and litter (see Table 3-6).

Among the environmental conditions cited by users are: not enough toilets (24 percent), river capacity problems, too many jet boats (15 percent), and too many rafters/kayakers (15 percent). The social conditions of greatest concern were the need for better handicapped access (25 percent) and use of alcohol (31 percent).

Boating safety was of little importance to motorized boaters (see Table 3-7). Forty-eight percent said that there are no boating safety problems. Safety concerns that did exist for motorized boaters include: the high speed of motorized boats (13 percent), the size of boat wakes (11 percent), the amount of maneuvering room for motorized tour boats (15 percent), and use of alcohol on the river (21 percent).

# **Nonmotorized Boat Floaters**

Recreational floating in the planning area is accomplished in every kind of craft imaginable, including inflatable rafts, hard shell and inflatable kayaks, canoes, and inner-tubes. Floating is generally considered a warm weather, day-use event, attracting experienced rafters and novice whitewater enthusiasts. The most popular float trip is from Hog Creek to Grave Creek, where several Class I and II rapids provide excitement. Floating has increased substantially over the last decade. One reason is the availability of reasonably inexpensive raft and kayak rentals with convenient shuttle services. Guided float trips are also available through commercial outfitters.

## **Demographics**

Overall, floaters are from all age groups, with a mean age of 38 years. There were more male floaters (64 percent) than female (36 percent). Floaters are well educated with 47 percent having earned a college degree. Fifty-six percent of the floaters live within an hour's drive of the river (0-50 miles). Only 17 percent of the floaters traveled more than a full day to reach the river (over 500 miles). Floaters are twice as likely to reside in Josephine County (36 percent) than in Jackson County (18 percent).

Most floaters tend to use the lower section of the Hellgate Recreation Area from Hog Creek to Grave Creek because it provides the best accessible whitewater. Party size averages six people, which is twice the size of other groups. A floater typically spends \$30 for a day trip.

Floaters visit the river for multiple recreational experiences. Private nonmotorized float trips are the most popular (85 percent), but substantial numbers of floaters have also participated in commercial rafting and kayaking, as well as jet boating, bank angling, hiking, and camping.



## Visitation Patterns

Floaters' reasons for visiting the Hellgate Recreation Area are centered on floating; however, viewing the river scenery, wildlife observation, being in a natural setting, good weather, and being with friends are also important. Floaters are associated with the warm weather months. Visitor-use levels by nonmotorized floaters and other visitors to the river are identified in the visitor use section of this chapter.

The majority of floaters (60 percent) make their trip just to visit the Rogue River. They are primarily local residents using the river for day outings, although a number of floaters also camp overnight on the river (19 percent) or stay with family and friends (18 percent).

Floaters are frequent visitors with almost 80 percent visiting the river once a year or more. On average, floaters have been visiting the river for 12 years and average five trips per year. Only 15 percent are newcomers on their first float trip. Repeat visitors report their use of the Rogue River as remaining the same or increased (89 percent). Only 11 percent indicated the frequency of their visits has decreased. They use weekends and weekdays about equally, but on a visit-per-day basis, the greatest numbers occur on warm summer weekends.

Over 70 percent anticipated making future trips about as often as in the past. The remainder either did not know what to expect (9 percent) or thought they would return less often (17 percent). These latter groups felt that the Rogue River was too far from home, too crowded, did not like the use of motorized boats, or felt user behavior was a problem.

Ninety (90) percent of the floaters use the stretch from Hog Creek to Grave Creek. Because of the lack of whitewater, only 10 percent use the upper stretch from the Applegate River to Hog Creek. Approximately 79 percent of all floaters use the popular boat ramps at Hog Creek (46 percent), Ennis (17 percent), and Galice (16 percent). Approximately 71 percent of floaters use the Galice (14 percent) and Grave Creek (57 percent) boat ramps for take-out.

## Floaters' Perceptions of Existing Conditions

Floaters' perceptions of ecological impacts, crowding, preferences for seeing others, encounters, user conflicts, trip satisfaction, and the problems they see all contribute to the social setting.

### Ecological Impacts

The major ecological impacts floaters identified were the presence of trash, water pollution, and riverbank erosion.

### Crowding

Eighty-six percent of floaters feel some degree of crowding, with most at the slight (24 percent) or moderate (49 percent) levels. Their sense of crowding was not because of other floaters or anglers by watercraft, but because a large portion of them (68 percent) feel jet boats interfered with their trip.

### Preferences for Seeing Others

Companions are an important part of any recreational trip. Almost half of the floaters sampled (43 percent) enjoy seeing others, while for 34 percent it made no difference. Twenty-three percent are bothered by seeing other parties. That a relatively low percentage were bothered by seeing others reflects the high-density, high-use experience floaters have come to expect from the Hellgate Recreation Area. Most floaters come to the recreation section prepared to meet other groups. This suggests that there are three categories of floaters: (1) those who are content with the social experience offered, (2) those who are indifferent to encounters by other parties, and (3) those who



would prefer fewer on-river contacts with groups outside their user type.

## **Encounters**

Two factors that help explain why people feel crowded are their expectations about the number of people they will meet and their actual encounters. On average, floaters expect to see 14 parties each day. Roughly one-third of all floaters encounter as many or less than expected, approximately another third encounter more, and the final third did not know what to expect. The acceptable numbers of encounters, or parties seen per day, is high.

Most floaters do not believe that exceeding encounter expectations is serious enough to warrant any change in their activities. Few become dissatisfied with their trip or decide to go elsewhere next time (10 percent). Others (17 percent) change the way they think about the Hellgate Recreation Area, choosing to see it as less remote. Floaters on this river stretch have adapted to high-density conditions, a common outcome at popular recreation areas. Rather than be disappointed, visitors alter their pre-trip expectations to be more in line with the actual conditions they find on site.

## **User Conflicts**

This description of user discord is measured by floater's perceptions of rude behavior, conflicts among users, and if other users interfered with their activities. Floaters having interference are primarily concerned with jet boat activity and crowded conditions (see Table 3-5).

Visitor behavior is not considered rude by approximately 40 percent of the floaters; another 40 percent feel it is a minor problem. Twenty percent of floaters feel rude behavior is either a problem or a major problem. More floaters feel user conflicts exist; 44 percent consider this a minor problem and 28 percent view it as more than a minor problem.

Thirty-eight percent of floaters feel that others interfere with their trip. Floaters view jet boats as the group most responsible for trip interference (68 percent). Over half the floaters feel speed, noise, and boat wakes from jet boat activity interfere with their trip. Ironically, almost half of the floaters (43 percent) also feel their own group interferes with their float experience.

Crowded conditions are a distant second (29 percent) on the floaters list of concerns. User behavior, such as making loud noise, misuse of alcohol, and poor river etiquette, is the third concern (11 percent), followed by safety (3 percent), and user-caused ecological impacts (1 percent).

In summary, user conflict is high for floaters. Approximately one-third of all floaters feel that neither user conflicts nor behavior problems exist.

## **Trip Satisfaction**

Visitor-caused impacts in the Hellgate Recreation Area have not deterred floaters from enjoying their activities. Most floaters (71 percent) rate their experience as excellent or perfect. One percent rate their experience as poor/fair, 8 percent good, and 20 percent very good. Increased visitor use levels of all types have had little effect on user satisfaction. Rather than become discouraged, floaters tend to adjust their view of the higher density situation and remain satisfied.

## **Problem Identification**

Conditions approaching problem levels were the number of jet boats, motor boat safety, and litter (see Table 3-6).

Among the environmental conditions, litter (48 percent) and not enough toilets (41 percent) scored high for floaters. Among the capacity problems, too many jet boats (53 percent) and congestion at



put-in and take-out facilities (37 percent) were the primary concerns. The social conditions of greatest concern were motor boat safety (47 percent) and use of alcohol (37 percent).

Boating safety was important to floaters (see Table 3-7). Major safety concerns exist for floaters due to the high speed of motorized boats (43 percent), the size of boat wakes (37 percent), the amount of maneuvering room for motorized tour boats (49 percent), and boats passing too close to rafters and other boats (39 percent).

## **Boat Anglers**

Boat angling typically involves the use of oar-powered drift boats. Most boat angling activity occurs in the Applegate Reach, which has superior fishing holes and is easily navigated. Some boat angling occurs using power boats that are capable of fishing a much longer stretch of river without having the inconvenience of running a shuttle.

Boat anglers typically spend four hours fishing, covering up to ten miles of river. Associated activities during the typical boat angling visit include lunch stops on shore and occasional hiking and exploring.

### **Demographics**

The majority (72 percent) of boat anglers are local residents who visit the Rogue River several times a year and intend to continue to visit in the future.

The typical angler is male, lives within 50 miles of the river, has been a river user for 11 years, and makes approximately 14 trips annually. He is a Jackson or Josephine County resident and spends little (\$20) on each trip. Since boat angling occurs throughout the year, fishing locations are likely to be geared to the season and type of fish. Approximately half reported they have rafted the river; many also hike (28 percent) and camp (32 percent). Peace, solitude, and the quality of the fishing are major reasons for coming to the Rogue River.

### **Boat Anglers' Perceptions of Existing Conditions**

Boat anglers' perceptions are unique among user groups since this activity involves frequent stationary activity at different fishing holes, riffles, and still water stretches. This factor allows the angler a prolonged opportunity to observe particular conditions germane to resource condition and resource quality. Boat anglers' perceptions of ecological impacts, crowding, preferences for seeing others, encounters, user conflicts, trip satisfaction, and the problems they see all contribute to the social setting.

#### **Ecological Impacts**

Impacts observed most often by boat anglers include presence of trash, bank erosion, and water pollution.

#### **Crowding**

Boat anglers as a group felt there was some degree of crowding (86 percent), with 49 percent feeling that crowding was moderate and 13 percent feeling it was extreme. Successful boat angling often involves finding the ideal boat location to maximize the chance of catching fish. This being the case, boat anglers are very sensitive to crowding in choice locations and will relocate until a position can be occupied that provides the probability of a catch.



## **Preferences for Seeing Others**

Boat anglers are often considered the least social of the river groups due to their need to find the ideal spot that is not crowded or interfered with by others. Boat anglers were generally unconcerned about seeing others; 72 percent either enjoyed it (26 percent) or did not care (46 percent).

## **Encounters**

Actual encounters and those that were expected prior to the boat anglers trip contribute to perceptions of crowding. Thirty-six percent of boat anglers encountered as many or less people than expected and 44 percent encountered more.

When boat anglers encounter more people than expected, it does not cause them to feel dissatisfied with their trip, or cause them to plan on fishing elsewhere in the future. Most simply modify their expectations so that the number of future encounters is compatible with their expectations.

## **User Conflicts**

This description of user discord is measured by the boat angler's perceptions of rude behavior, conflicts between users, and if other users interfered with their activities. Boat anglers experiencing interference are primarily concerned with jet boat activity (57 percent), rude behavior (20 percent), and crowded conditions (14 percent).

## **Trip Satisfaction**

Levels of use, types of use, and user behaviors have had little effect on boat anglers being able to continue to enjoy their chosen activity. Ninety-two percent of boat anglers rated their experience good to excellent, while only 8 percent rated their trip poor to fair.

Rating trip satisfaction among boat anglers can be problematic considering that one of the chief factors of enjoyment and satisfaction for many anglers is success in the catch. Fortunately, the Rogue's relatively numerous fish runs and relatively large fish populations help to maintain the quality of the angling experience.

## **Problem Identification**

Conditions approaching problem levels were the number of jet boats, motor boat safety, and litter (see Table 3-6).

Among the environmental conditions, litter (49 percent) and not enough toilets (40 percent) scored high for floaters. Among the capacity problems, too many jet boats (73 percent) and congestion at put-in and take-out facilities (37 percent) were the primary concerns. The social conditions of greatest concern were motor boat safety (57 percent) and the use of alcohol (37 percent).

Boating safety was important to floaters (see Table 3-7). Major safety concerns exist for floaters due to the high speed of motorized boats (43 percent), the size of boat wakes (37 percent), the amount of maneuvering room for motorized tour boats (49 percent), and boats passing too close to rafters and other boats (39 percent).



# Bank Anglers

Bank angling is the dominant type of angling activity throughout the planning area. When fish concentrations are high and fishing success is optimum, bank anglers literally line the banks at some of the more popular and productive holes. Crowding does occur at certain locations.

Bank anglers typically spend four to six hours fishing, rarely moving to other locations. An associated activity during the typical bank angler's visit is wildlife observation.

## Demographics

The majority (84 percent) of bank anglers are local residents who visit the Rogue River several times a year and intend to continue to visit in the future.

The typical angler is male, lives within 50 miles of the river, has been a river user for 10 years, and makes approximately 20 trips annually. He is a Jackson or Josephine County resident and spends little (\$20) on each trip. Since bank angling occurs throughout the year, fishing locations are likely to be chosen according to the season and type of fish.

## Bank Anglers' Perceptions of Existing Conditions

Bank anglers' perceptions are unique among user groups since this activity involves frequent stationary activity at different fishing holes. This factor allows the angler a prolonged opportunity to observe particular conditions germane to resource condition and resource quality. Bank anglers' perceptions of ecological impacts, crowding, preferences for seeing others, encounters, encounter norms, user conflicts, trip satisfaction, and the problems they see all contribute to the social setting.

### Ecological Impacts

Impacts observed most often by bank anglers are the presence of trash, bank erosion, and water pollution.

### Crowding

Bank anglers as a group felt that there was some degree of crowding (89 percent), with 51 percent feeling that crowding was moderate and 14 percent feeling it was extreme. Successful bank angling often involves finding the ideal bank location to maximize the chance of catching fish. This being the case, bank anglers are very sensitive to crowding in choice locations and will relocate until a position can be occupied that provides the probability of a catch.

### Preferences for Seeing Others

Bank anglers, who typically desire fishing locations that are not crowded and that are the most desirable for fishing success, were generally unconcerned about seeing others as long as their experience is as ideal as possible; 72 percent either enjoyed it (26 percent) or did not care (46 percent).

### Encounters

Actual encounters and those that were expected prior to the bank anglers trip contribute to perceptions of crowding. When bank anglers encounter more people than expected, it does not cause them to feel dissatisfied with their trip, or cause them to plan on fishing elsewhere in the future. Most simply modify their expectations so the number of future encounters is compatible with their expectations.



## **User Conflicts**

This description of user discord is measured by the bank angler's perceptions of rude behavior, conflicts between users, and if other users interfered with their activities. Bank anglers experiencing interference are primarily concerned with jet boat activity (57 percent), rude behavior (20 percent), and crowded conditions (14 percent).

## **Trip Satisfaction**

Levels of use, types of use, and user behaviors have had little effect on bank anglers being able to continue to enjoy their chosen activity. Ninety-two percent of bank anglers rated their experience good to excellent, while only 8 percent rated their visit poor to fair.

Rating satisfaction among bank anglers can be problematic considering that one of the chief factors of enjoyment and satisfaction for many anglers is success in the "catch". Fortunately, the Rogue's relatively numerous fish "runs" and reasonable fish populations help to maintain the quality of the angling experience.

## **Experience**

Bank anglers described the current river experience as either semi-primitive or semi-developed where they met others and found development levels generally low.

## **Problem Identification**

Conditions approaching problem levels were the number of jet boats, motor boat safety, and litter (see Table 3-6).

Among the environmental conditions, litter (49 percent) and not enough toilets (40 percent) scored high for floaters. Among the capacity problems, too many jet boats (73 percent) and congestion at put-in and take-out facilities (37 percent) were the primary concerns. The social conditions of greatest concern were motor boat safety (57 percent) and the use of alcohol (37 percent).

Boating safety was important to floaters (see Table 3-7). Major safety concerns exist for floaters due to the high speed of motorized boats (43 percent), the size of boat wakes (37 percent), the amount of maneuvering room for motorized tour boats (49 percent), and boats passing too close to rafters and other boats (39 percent). Other noted problems include the overall operation of jet boats and motorized boats, which may be a comment on their presence more than over any specific safety item.

# **Recreational Opportunities**

## **Camping**

There are four developed public campgrounds: Whitehorse, Griffin, Indian Mary, and Almeda. The 4 campgrounds provide 178 campsites with a range of tent to recreational vehicle camping. These campgrounds are often full to capacity Memorial Day through Labor Day. The demand for developed campgrounds within the Hellgate Recreation Area has surpassed the supply during the peak season.

There are three primitive public camping areas with rustic toilets: Ennis, Argo, and Robert Dean. These 3 areas have enough space for approximately 17 camping groups, on 118 acres, in their present primitive state. Ennis and Argo are accessible by road and are often full to capacity on weekends from Memorial Day to Labor Day. Robert Dean is accessible by boat and is utilized many weekends during the summer.



There are 28 primitive public camping areas without toilets or other facilities that provide 41 campsites on 58 acres. In the 1980s and 1990s, there has been an increase in primitive camping in the planning area. The demand for developed camping is overflowing into the primitive sites that are auto accessible. Two of the 28 primitive camp areas (Rocky Bar and Lower Hellgate) are accessible by vehicle, boat, and foot. One to two sites are occupied throughout most of the summer. The remaining 26 primitive camp areas are accessible by boat and foot. Seven of the primitive camp areas are occupied at least one to three weekends in the summer; these sites are: Dunn, Lower Hellgate, Stratton Creek, Paine Gulch, Upper Ennis, Rocky Riffle, and Tahiti (see USDI, BLM, MDO 1993). The remaining 20 camp areas are suitable for camping, but are primarily day-use sites.

Inventories in 1989 and 1990 found the 28 primitive camp areas in excellent to poor condition. Rocky Bar is in poor condition due to off-highway vehicle (OHV) use, historical mining, recreational mining, litter, fire rings, and human waste. In the spring of 2000, a volunteer camp host was utilized to provide onsite maintenance and visitor services. This management tool is expected to help mitigate problems occurring at the site and to assist in the rehabilitation of the bar. The seven camp areas listed in the previous paragraph are in good condition with an occasional minor problem with litter, human waste, trampling and fire rings. The remaining 20 camp areas are in excellent condition due to light camping use and a resilient ecosystem (sand and bedrock). The riparian ecosystem on the Rogue is highly resilient due to ample rainfall, which allows for rapid vegetative recovery from trampling, and a large percentage of rocky and sandy surfaces where primitive camping is likely to occur.

## Trails

There are presently no developed trails within the planning area. However, informal trails have been developed through the casual use of BLM-administered lands by anglers, horseback riders, mountain bikers, and off-highway vehicle (OHV) users (see Table 3-8). Many of these trails have been identified for potential development.

## Public Access

Access, as used here, means the ability of recreationists to reach the areas they wish to use. Public access to the bed, banks, and upland areas of the river is limited by three factors: the steep topography of the canyon, private land, and the present state of the road and trail systems.

Major portions of land between the Applegate River and Hog Creek are privately owned; therefore, public access in this area is limited to Josephine County Parks and a few parcels of BLM-administered land. Paved roads provide public access to the river and adjacent public lands at seven locations on the river in the Applegate to Hog Creek stretch. These roads are generally located within 0.1 to 1 mile of the river.

From Hog Creek to Grave Creek a paved road parallels the river with the river being less than one quarter of a mile from the road. This road is part of the Galice-Hellgate National Back Country Byway, as the river is within view of automobile passengers most of the way.

## Launching and Landing Areas

There are 13 regularly used launching/landing sites in the 27-mile stretch of the planning area. All 13 sites are improved and 10 of the sites have paved boat ramps. The highest concentrations of use by white water boaters occur at Hog Creek, Ennis, Galice, and Grave creeks during the summer months. Griffin and Robertson Bridge get the largest concentrations of use during the peak fishing seasons (September through October and January through March).



## Facilities

Various public facilities, including roads allowing access to the river, parking areas, campgrounds, boat ramps, trails, toilets, drinking water, and trash receptacles, have been provided by federal, state and local government agencies.

## Fees

At present, there are no BLM user fees for private recreational use of the river corridor.

Commercial recreational use is regulated by and assessed fees through the BLM's Special Recreation Permit regulations. All commercial recreation providers (permittees) are required to submit monthly use reports, which detail the type of activity provided, the number of passengers, the area of operation, type(s) of crafts used, and gross revenues collected from customers.

Information supplied by commercial providers is used to calculate their fees using an assessment rate of 3 percent of gross receipts, or a minimum of \$70, whichever is greater. An annual billing is sent to each permittee to close out the fees based on the calendar year.

Prior to commercial operation in a new calendar year, each permittee must prepay an amount equal to their last year's fees. Prepayment amounts more than \$500 are assigned a staggered payment schedule to lessen the burden on the permittee. Lesser amounts are due and payable 30 days prior to operation.

## Visitor Services

The Rand Visitor Center presently functions (in a minimally acceptable way) to issue permits for floaters in the "wild" section. The site is inappropriate for any expanded use. Rand is a National Register Historic Site. This status precludes any modifications or improvements to existing structures.

## History

The first recorded settlers of this site were farmers and miners back in the 1850s. In the early 1900s, a rich vein of gold was discovered at Almeda Mine, and Rand was proposed as a town site by the miners. The vein was not as productive as expected and hopes of a town site faded. The site represents an important federal government response to the Great Depression.

In 1908, the Siskiyou National Forest set up a temporary office. The Rand Ranger Station was officially established in 1916 as an administration headquarters for the Galice Ranger District of the Siskiyou National Forest. The station played an important role in fire suppression, trail and telephone line construction, homestead entry management and timber sales. The Rand Ranger District was one of six established by the USFS by 1909. It was not until 1917 that construction began on the first frame buildings, including a dwelling, barn, and office. The buildings were probably designed to serve immediate needs. Influences to create a permanent station also included the increase in auto travel and more tourists in the area beginning in the 1920s.

The Civilian Conservation Corps (CCC) operated a large camp at the south end of Rand from 1933 to 1941. In 1955, the BLM began operating a maintenance station at Rand. The Forest Service continued to operate at Rand until their move to Grants Pass in 1964. The complex was unused for six years, except for temporary leases. Rand was transferred from the Forest Service to BLM in 1970 after the passage of the Wild and Scenic River Act of 1968 and the listing of the Rogue River. The office became the BLM visitor center. For the past 30 years, the BLM has used



Rand as a base for recreation management and maintenance operations of the Rogue National Wild and Scenic River.

## **Current Situation**

The Rand Ranger Station is located in the Rogue River Canyon near Galice, Oregon, in the Klamath Mountains (aka Siskiyou Mountains), approximately 25 miles northeast of Grants Pass, Oregon, and approximately 3 miles downstream from the community of Galice. The ranger station is accessible from Galice Road. The site is approximately nine acres and lies at the base of steeply rising slopes. The site contains 12 structures, 9 of which were built during 1933-37 by the CCC. The Rand Ranger Station on the National Register of Historical Places.

The one-story, rectangular, wood frame building measures approximately 32'x16' in size (120 square feet of public area, including one restroom). The center serves approximately 25,000 visitors annually. Current parking is inadequate and unsafe for re-entering Galice Road, especially for vehicles with boat trailers in tow. The limited size of the structure precludes compliance with laws governing public building access, sanitation, and design.

The Rand Visitor Center (VC) accommodates a broad range of visitors. These visitors engage in a variety of recreational activities within the National Wild and Scenic Rogue River corridor, such as hiking, wildlife viewing, driving for pleasure, fishing, picnicking, camping, rafting and swimming. The BLM provides a variety of administrative services, such as wild section permit administration, commercial permit administration, river-use education (e.g., the area's cultural, Native and geological history, how to use the river safely, river etiquette), day-use and camping opportunities, and equipment inspection.

# **Boating Safety**

Safety concerns are in part generated by the disparity between the motorized and nonmotorized craft and other bank, bed, and water use. Since the early to mid-1980s, the level of recreational use in the study reaches has increased notably. Since the early 1980s, the annual number of MTB passengers has grown from approximately 19,000 to 70,000; and since the mid-1980s, the number of individual MTB trips has grown from approximately 330 to 760 annually (Walker and Austermuehle 1994). Most of this use occurs in May to September, with peak monthly use in August. Drift boat angling, which accounts for another 8,000 annual visits, is tied to the timing of anadromous fish runs. Typically a peak in drift boat activity occurs in August and September, timed with the fall Chinook runs. Wading and swimming typically occur at several county park access sites at very low use levels.

MTBs operate from Grants Pass to below Hellgate Canyon and return (a 41-mile round trip) and to Grave Creek and return (a 67-mile round trip). By permit regulation, the season of commercial MTB operations currently extends from May 1 to September 30. Private jet boats also use this reach for angling and general on-river recreation. In the first four miles of the Hellgate Recreation Area, there are many single family dwellings, some of which have direct access to the river. The rest of the recreation area has scattered cabins and houses, and open space created through land purchases by the BLM for the purposes of scenic and recreational resource management.

Generally, private jet boats are used between Grants Pass and Zigzag Creek (19.7 miles), with a few using the entire Recreation Area; most use is between Grants Pass and Robertson Bridge (RM 14.8). General float craft activity occurs between the Hog Creek Ramp and Grave Creek using a variety of access points for put-ins and take-outs.



## Sites of Concern

The sites of concern were identified through a process of field review and aerial photo review of MTB navigational/operational options and line-of-sight limitations. All the rapids and riffles with limited navigational/operational options and visibility limitations were reviewed. Rapids or riffles with unseen channel portions between MTB set-down areas were defined as sites of concern. Also included were some rapids and riffles that had no sight limitations, but had set-down threshold and line-of-sight geometry that indicate there could be circumstances that might limit a MTBs ability to accommodate float craft.

Sixteen such sites were identified. Analysis indicated that at 14 of these sites, situations existed where craft separation thresholds could be inadvertently exceeded and where accidents were possible even under the best of current operational and navigational circumstances. At these 14 sites, approximately 16 out of 100 jet boat runs could result in inadvertent accidents when float craft are at these sites and not in view of the jet boat operator. Contrary to user perception, the analysis indicated that the average inherent safety risk probabilities of the lower gradient riffles in the Applegate Reach were approximately twice those of the steeper gradient rapids of the Hellgate Reach.

This analysis also showed that the inherent safety risks were 37 percent greater under lower flow conditions due to more limited jet boat operational flexibility and narrower channels. The inherent safety risks for upstream jet boat operations were greater than downstream operations due to flow conditions, line-of-sight thresholds, and waiting times at specific sites.

The daily white water commercial jet boat trips accounted for approximately 70 to 80 percent of the total seasonal safety risk exposure of the entire commercial jet boat seasonal schedule. For the entire seasonal commercial jet boat schedule, low flow conditions present approximately 30 percent greater levels of safety risk exposure than do high flow conditions.

Overall, under current operating practices and operating plan regulations, channel/hydraulic characteristics, craft characteristics, and user patterns were such that it was not possible for potential accident situations to be avoided. The development of those situations was outside the control of craft operators. Actual accident scenarios would be a function of the particular distribution of craft in the potential accident situations, their speeds, and the actions of operators. These results indicated that the existing record of jet boat related incidents and accidents were not reflective of the nature and potential severity of possible future accidents. Due to the present user activity levels, the probability of a major accident is very small. The analysis did not address issues of acceptable levels of safety risk.

## Problem Identification

In the scoping process for the RAMP, boating conflicts and boating safety were identified as important issues by the public and by local, state, and federal agencies. Public concern had been expressed over the increasing number of river users and the intermingling of diverse types and sizes of watercraft on the Rogue River. These concerns involved both perceived and actual threats to personal safety, as well as competition among users for space or position on the river, increasing the potential for conflict among users.

The safety of visitors to the Rogue River is of foremost importance to the BLM. As part of the RAMP effort, the BLM identified the need for a technical background evaluation of boating safety risks and conflict issues. The evaluation specifically targeted the interaction between motorized and nonmotorized boat users.

The objectives were to develop a quantitative assessment of boating safety and conflicts in the Hellgate Recreation Area of the Rogue River and to develop safety risk probability estimates.



This assessment of safety risks and conflicts was developed using a two-part approach: (1) the physical nature of the channel and hydraulic conditions, the operational characteristics of various craft, and user patterns; and (2) the perception of safety risk situations in the study area, as perceived by members of a focus group.

To realize the study objectives, a risk probability modeling approach was developed for quantifying the levels of boating safety risk and conflict. The estimates of safety risk exposure and conflict probabilities were based on: what was known, measurable, and observable about jet boat operations and craft characteristics; observed and measured channel/hydraulic conditions; observed and measured float craft use patterns at specific sites of concern; assumptions about craft operator decision making; definitions of potential safety risk situations and acceptable craft separation standards; spatial and temporal distribution models of jet boat and float craft activity throughout the recreational day; and seasonal jet boat and float craft use levels.

# Visitor Use

## History

The Rogue River, its shoreline lands, and tributary streams have been the paramount natural features of the entire Rogue Valley since the arrival of the first migrational native peoples over 9,000 years ago. The Rogue corridor has served since that time as a travel route, trade corridor, food source, and habitation site.

Since the arrival of European Americans, the role of the Rogue began to change. First, as a commercial revenue source (through hydropower production, commercial fishing, irrigation, and other uses) and second, as a recreational resource. At this point in the river's history, its capacity for the various consumptive uses began to be tested.

Today, as the level of development along the river and its environs peaks and stabilizes, the dominant use of the waterway is visitors engaging in privately and commercially provided recreational activities. In 1991, 700,000 people visited the Hellgate Recreation Area (Austermuehle 1995).

## Current Situation

The variety of on-water uses of the river within the Hellgate Recreation Area is increasing (Austermuehle 1995) and is the most important factor in the analysis of how different recreational activities coexist in harmony or conflict with each other. User conflict within the Hellgate Recreation area is well recognized as a driving force for the reexamination of water and land use allocations on this federally-managed section of the river. Information gathered from river users indicates that almost half (43 percent) have experienced interference by others while participating in their particular activity (Schindler and Shelby 1993).

River managers throughout the nation have long recognized the sense of ownership individual user groups have for their chosen activity. Each user group commonly exhibits pride and preference for their activity choice, and in many instances, a certain desire to limit activities that may interfere with or affect the enjoyment of their particular recreational pursuit. Thus, river managers are challenged to provide a use environment that most reasonably serves the needs and desires of the widest variety of user groups.

On-water visitor use patterns during the year generally fall within three broad chronological spans. The period of highest visitor use typically occurs from May to mid-September, in conjunction with good weather for floating, the motorized tour boats' operating season, and school vacation (see Figure 3-3 and 3-4). The period of next highest use is from January to March when there is



increased boat angling activity associated with the winter steelhead and spring salmon runs (see Figure 3-5). The period from mid-September through December gets the least amount of use (see Figure 3-5) and is recognized as the "fall fishing season." This period of low use is due to inclement weather, holiday activities, and the start of the school year (Austermuehle 1995).

While motorized tour boating accounts for the largest number of visitor use days (see Tables 3-10 and 3-11), nonmotorized activity accounts for the largest number of float craft (see Table 3-12) occupying the available river space during the peak use months. This situation creates a physical environment where unpowered downstream boat traffic can conflict with down and upstream motorized traffic. Situations where users perceive interference with their activity are most prevalent when this happens.

The most popular river reach for nonmotorized boat use during the peak use season is the Dunn Reach. This section starts at Hog Creek and proceeds down stream to Grave Creek (see Map 1-1). The area where the most user conflicts occur is from Hog Creek boat landing to the Hellgate Canyon. All motorized tour boat trips, including the dinner and lunch runs, travel at least to the bottom of Hellgate Canyon, which puts them in the river channel with the less maneuverable float craft that launch from Hog Creek. The commercial motorized tour boat operator has adjusted launch times to reduce the encounter period between motorized and nonmotorized traffic (Austermuehle 1995).

Nonmotorized boat traffic has the right-of-way by marine law. This fact in itself fuels conflict between motorized and nonmotorized users. In many situations, motorized traffic is delayed for long periods of time due to lengthy processions of float craft proceeding down certain channels that are insufficiently large to allow two-way traffic. Mitigating measures, such as the employment of channel observers who radio motorized craft when the channel is clear for passage, are utilized to help alleviate congestion in certain locations. For the most part, however, river users must rely on their own sense of river etiquette to allow safe and timely passage for both types of river craft through constricted river reaches (Watson and Grove 1995).

Off-water or land-based use varies considerably with each activity. Driving for pleasure, bicycling, horseback riding, and hiking are a few of the many uses that are not river dependent. These activities comprise a large portion of the total visitor use days.

Bank angling is the dominant recreational activity for those users utilizing the river without float or motorized craft. This use is, of course, river dependent and is definitely affected by other on-water activities. Bank angling amounted to 14 percent of the recreational use of the Rogue's waters in 1991 (Austermuehle 1995).

Bank anglers as a group live closest to the Rogue River. Almost three-fourths live within 50 miles of the river and are the most frequent visitors to the Rogue corridor. Anglers in general have shown a low tolerance of interference with their activity. Bank anglers perceive the use of motorized craft, especially motorized tour boat traffic, as a nuisance that they must endure. Noise, interference with fishing lines, and boat wakes are most often the factors of chief concern to this group (Schindler and Shelby 1993).

Passengers on the motorized tour boats and users of private motorized craft have been shown to be the groups least affected by other categories of use and that have been more tolerant of encounters with others. Factors such as brief encounter times and low encounter frequencies are the primary reasons for the low level of concern among the groups (USDI, MDO, GPRA 1994).

Recreational uses on the Rogue that involve use of the waters within the planning area are those that are most likely to conflict with the more consumptive uses, such as motorized boating activity. Conflicts among users and competition for unencumbered use of the available water space create feelings of resentment and frustration for certain recreationists. Mitigation of this situation poses the prime management challenge for the managing agencies.



# Law Enforcement/Emergency Services

The planning area has overlapping law enforcement coverage by the Josephine County Sheriff's Department, the Oregon State Police, BLM Law Enforcement Rangers, the U.S. Coast Guard, and the Oregon State Marine Board. This overlapping coverage is not inclusive of all governing statutes, regulations, and laws. Each agency has defined responsibilities and authorities to cover specific law enforcement categories and enforcement situations.

The Josephine County Sheriff's Department provides the most pervasive law enforcement presence within the planning area. Regular Patrol Deputies in vehicles provide first response enforcement of applicable Oregon Revised Statutes relating to criminal activity and vehicular laws. Special Marine Deputies funded through the Oregon State Marine Board utilize motorized and nonmotorized river craft in the enforcement of boating safety laws.

The Oregon State Police are primarily responsible for the enforcement of all game laws. State Troopers utilize patrol vehicles and occasionally motorized and nonmotorized craft for on-river enforcement efforts.

BLM Law Enforcement Rangers emphasize the enforcement of applicable federal statutes, both on land and water. Their primary responsibility is the enforcement of federal laws as they relate to use of the river corridor by commercial recreation providers, or to any other river users violating any rules, laws, or restrictions established to regulate use within the confines of the federally-controlled waters or surrounding federal lands. The BLM Rangers are also authorized to enforce Oregon state statutes when necessary.

The U.S. Coast Guard is primarily responsible for enforcement of all rules relative to the use and operation of vessels qualifying for Coast Guard Certification. This limits their involvement to the motorized tour boats and any smaller boat wherein its use requires the operator to have a small craft operator's certificate (commonly referred to as a commercial six passenger license). The Coast Guard's presence on the river is rare and is always limited to administrative enforcement of those operators who fall within the scope of their authority.

The Oregon State Marine Board's primary responsibility is to monitor river use relative to boating regulations, stream stretch restrictions, safety signing, and outfitter licensing through the state's outfitter licensing program. Their actual presence on the river is minimal, with their enforcement efforts being administrative in nature. Actual authority on-the-ground enforcement is contracted out to the Josephine County Sheriff's Department.

In certain and rare occasions, all these law enforcement entities can coalesce for common law enforcement or emergency purposes. Close coordination provides an adequate force for the overall law enforcement needs of the planning area.

## Guided and Outfitter Services

The planning area is served by over 135 outfitter/guide commercial recreation providers. All these providers are authorized to offer commercial services through the authority established for the Special Recreation Permit (Ref 43 CFR 8372). Special Recreation Permittees are required to meet minimum standards to acquire an Oregon State Marine Board Guide's License, have insurance in effect to protect customers and the BLM, and show to the issuing office (Medford BLM) they are capable of providing professional level services within the planning area. Specific stipulations are attached to the permit to insure that all commercial operations are conducted in a safe manner and in full compliance with all applicable state and federal laws and regulations.



The great majority of permittees offer water-based recreational activities. By permittee, there is a predominance of guided fishing trips within the commercial offerings, though guided floating trips account for a significant portion of the commercial activities. The single most prevalent activity (based on total use figures) is the motorized tour boat (MTB) trips, which account for over 70,000 passengers per year. This activity is supplied by and through one permittee based in Grants Pass. The MTB trips are only federally-controlled for the portion of the trip that occurs within the planning area. The portion of the trip that occurs between Grants Pass and the RAMP area is governed by state regulations.

The sheer number of permittees and the wide variety of recreational opportunities they offer provide the public with an array of activities that can often be tailored to meet specific needs or desires.

To ensure that the public is well served by permittees, monitoring and administration of each permit is done by the BLM management staff in the field so they can observe commercial activities to determine if all permit stipulations are being followed. At the end of each year's operating season, the performance of each permittee is evaluated. Less than acceptable performance can result in permit probation, suspension, revocation, or other administrative penalties.

The BLM's role in dissemination of information regarding outfitter/guides is limited to providing lists (addresses and phone numbers) to the public of all currently permitted providers. No preferential recommendations are offered by the BLM in the giving of such information.

## **Landowners**

There are approximately 190 residences from the mouth of the Applegate River to Grave Creek; most are occupied full time by the property owners. A majority of the residences are riverside properties that can be directly impacted by activities on the river.

The owner/occupants of these properties for the most part chose to live on the river because they enjoy river-related activities or enjoy the river environment. They enjoy the solitude of the country. Any disruption to this solitude is viewed negatively and as a disruption to the quiet enjoyment of their property.

### **Landowners' Perceptions of Existing Conditions**

Landowners' perceptions of ecological impacts, peaceful enjoyment of property, preferences for seeing others, the sounds of river users, and the problems they see all contribute to the social setting (York, Rowland and Salley 1994).

#### **Ecological Impacts**

The major ecological impacts landowners identified were increased riverbank erosion, damage to fish and spawning grounds, and sound pollution.

#### **Satisfaction with Peaceful Enjoyment of Property**

Sixty-seven percent of the landowners gave unfavorable ratings to all groups of users, with 45 percent being extremely unfavorable. Private motorized boats received a 37 percent unfavorable rating. Those who rated tour boats to be a significant or major problem in regards to sound also reported that tour boats are a sight problem (93 percent concurrence) and represent a problem to their privacy (86 percent concurrence).



## **Preferences for Seeing Others**

When asked how much of a problem the sight of each type of user was to the respondent, 56 percent rated MTBs as being a significant or major problem. Thirty percent also rated private motorized boats as being sight problems, while other users received no more than a 12 percent rating in these problem categories.

## **Sounds of River Users**

Motorized tour boats were found to be the most problematic in regards to sound generated. Sixty-nine percent rated either significant or major. Forty-one percent also rated private motorized boats as being the source of sound problems. None of the other users were identified by more than 15 percent of the respondents as being a source of a "significant" or "major" sound problem.

## **Problem Identification**

Residents' opinions can be helpful in identifying potential problems. Conditions approaching a problem level were the number of jet tour boats and concern for ecological damage.

Among the environmental conditions landowners rated riverside soil erosion and other ecological damage as high. Regarding the degree to which user types represented a problem to the landowner's privacy, 58 percent of the respondents reported MTBs to be a significant or major problem. Of that 58 percent, 95 percent wished for a reduction or elimination of tour boat traffic. Private motorized boats (31 percent) and campers (24 percent) also received notable ratings indicating a problem. No other users were given more than a 15 percent problem rating.

# **Sound**

## **Natural/Riffle Sounds**

Natural sounds were measured primarily as a baseline for comparison to sounds from visitors and machines. It was difficult to isolate bird sounds from the background or ambient sounds.

Most of the loudness measurements were made within the length and width of specific riffles. Almost half of the natural sounds measured were class I and class II riffles. They had a decibel recording that ranged from a low of 56.0 to a high of 83.0 with an average of 70.0 decibels. Riffles and other sounds from the river were the only sound generators that emitted continuous sound. All other sounds measured were lower occurrence levels when compared to this continuous river sound.

## **Sounds Made by Visitors**

### **Commercial Motorized Tour Boats**

Measurements of loudness from commercial motorized tour boats were from three sources: BLM stationary test, Oregon Department of Environmental Quality, and BLM pass-by measurements. State of Oregon sound standards for mufflers on private motorized recreational watercraft are not applicable to commercial motorized tour boats. However, these standards were used as a comparative measure. In 1993, nine of the motorized tour boats in the Hellgate Excursions, Inc. fleet were inventoried for sound using the Oregon State Marine Board standards. All motorized tour boats (MTBs) inventoried were within the Oregon State Marine Board standards (USDI, BLM, MDO, GPRA 1994).



Recordings of the decibel levels produced by motorized tour boats made when the boats were being operated in various ways from slow, no-wake conditions to speeding, on-plane operations. The pass-by decibel measurements for motorized tour boats ranged from a low of 46.2 to a high of 87.6 with an average of 66.5 decibels. This range is similar to that of riffles.

### **Commercial Motorized Angling Boats**

Motorized angling boats have approximately the same sound characteristics as private motorized boats.

### **Hydroplane Boats**

Loudness measurements of hydroplane boats were limited. The loudness of two boat runs was measured and ranged from a low of 45.2 to a high of 107.8 decibels. The high range of loudness recordings was corroborated by measurements recorded by the Oregon Department of Environmental Quality in 1988. The 1988 measurements ranged from a high of approximately 113 to a low of 45 decibels.

### **Private Motorized Boats**

The loudness range was from a low of 48.1 to a high of 88 decibels.

### **Nonmotorized Float Boats**

Nonmotorized boating includes the inflatable kayaks, paddle rafts, oar framed rafts, catamarans, canoes, and hardshell kayaks. In general, the inflatable kayakers and paddle rafters are the loudest. These visitors usually are in social groups that are more likely to engage in water fights.

The sound measured was from a range of sources, such as several groups putting in at a boat ramp with associated vehicle sounds in the background to individuals floating by without making any human sounds. The measured low was 50 decibels and the high was 79.4 decibels.

### **Nonmotorized Angling Boats**

Nonmotorized angling by watercraft usually means fishing by drift boat. The anglers in general are pursuing solitude. These visitors are making boat sounds through the use of their oars and by talking. No actual decibel measurements were collected for this activity. The range of loudness of this group was estimated to be from 45 to 55 decibels.

## **Sounds Made by Machines**

### **Homeowner Activity Sounds**

The loudness of sounds produced by a wide range of homeowner activities was measured. The decibel level of most of the sounds was in the range of those of nonmotorized watercraft (i.e., 45 to 55 decibels), especially during the night hours. Measured homeowner activities included the use of air conditioners, sewing machines, vacuum cleaners, TVs, dishwashers, washing machines, garbage disposals, lawn mowers, and chain saws. The range of loudness from these machines is from 60 to 96 decibels.

### **Machine Sounds**

Sound from the following sources was measured: air horn, airplane, car, chainsaw, lawn mower, logging truck, public address system of motorized tour boat, pump, radio, truck, vehicular traffic, and weed eater. The low measurement was 43 decibels and the high was 132 decibels. A diesel truck may generate 80 to 90 decibels, audible at 50 feet (USDI, BLM 1978). An off-highway



recreational vehicle may generate sound levels that approach those of a diesel truck, depending on the type of muffler used, size of engine, and the speed of the vehicle. Chain saws can be heard for great distances (USDI, BLM 1978). The approximate loudness of a chain saw at 50 feet is 86 decibels. A gunshot at 50 feet was measured at 136 decibels.

The sound produced by four sources was measured in the Hellgate Recreation Area. They are listed with their low, high, and average decibel levels: airplanes - low 47.1 dB, high 132 dB, average 68.9 dB; lawn mowers - low 50.6 dB, high 61.0 dB, average 57.4 dB; pumps - low 43 dB, high 79 dB, average 60.7 dB; and vehicular traffic - low 49 dB, high 84 dB, average 57.4 dB.

## **Sound Sensitive Property**

Sound sensitive property is defined as private property normally used for sleeping, or as schools, churches, hospitals, or public libraries.

Limp Creek to Jumpoff Joe Creek was identified as an areas with sound sensitive properties (Map 3-3). The sound sensitive property was identified using upon a combination of the following: residential zoning, housing densities per river mile, tourist commercial zoning, river community classification, and the Southern Oregon University's survey of landowners residing within the Hellgate Recreation Area.

Property zoned for farm, forest, woodlot, or tourist commercial activities was not considered sound sensitive. The river community of the Galice Subdivision was not considered sound sensitive even though it had a relatively high housing density per river mile and was also zoned rural residential. The rationale was that this area was adjacent to the area in Galice zoned tourist commercial and that a large number of the residential properties had commercial activities occurring on them in the form of home-based businesses.

### **Landowners**

Landowners rated motorized tour boats to be the greatest source of problem sound, with 69 percent rating it as either significant or major (see Table 3-13). Fourteen and one-half percent (14.5) of the respondents rated campers as either a significant or major sound problem. Anglers received 1.6 percent of responses in the significant or major problem categories. No respondents rated nonmotorized river traffic or hikers as a significant and major sound problem.

Those who found sound to be a problem generally also reported it to be a sight problem and an intrusion on their privacy. This tends to indicate that sound cannot be isolated as the only problem that landowners have with river traffic.

## **Transportation**

The main transportation system primarily consists of Oregon State, Josephine County, and BLM roads that access BLM, county, and private recreational sites along the river. Generally, BLM recreational site access roads are single lane, crushed rock surface, or natural surface roads that do not exceed 1/2-mile in length.

Light to moderate use of state and county roads occurs November through April consisting mainly of residential and some recreational traffic. Moderate to heavy use occurs May through October, particularly on the weekends, with a significant increase in recreational traffic.

State and county road maintenance consists of annual roadside brushing, ditch cleaning, and hot patching of the asphalt surface as needed. The BLM roads are maintained as requested by the Rogue River Program Manager, as scheduled by the road maintenance foreman, or as requested by



the Resource Area. Two river segments have been identified for inventory purposes: segment 1, from the Applegate River to Hog Creek and segment 2, from Hog Creek to Grave Creek (see Tables 3-14 and 3-15).

## Quarries

There are two existing quarry sites adjacent to segment 1 of the river corridor: Gunnell Quarry (T. 36S., R. 7W., SE1/4 NW1/4 Section 14) and Hog-Jumpoff Quarry (T. 35 S., R. 7W., NW1/4 NW1/4 Section 14). Both quarries are on private land.

## Salable Minerals

Salable minerals are those mineral materials including sand, gravel, stone, clay, and other common varieties that may be sold to the public or made available as free use to other federal, state, or local government agencies. Disposal of common varieties is discretionary and meant to be compatible with the land use allocation and not cause unnecessary or undue degradation.

The Flanagan Slough area, which has a history of hydraulic mining, has been identified as a proposed recreation site. There is a substantial quantity of mining tailings, consisting mainly of river-run rock, that could be sold to the public as part of rehabilitating the area.

## Capacity

The capacity of a transportation system reflects its ability to accommodate a number of people or vehicles. The level of service a transportation system delivers directly effects vehicular capacity and quality of flow. Capacity and quality of flow are two indices of measuring the need for improvements to an existing transportation system. The 1991 flow capacity (i.e., highest peak hourly traffic rate) for the Merlin-Galice Road is identified in Table 4-8. The highest peak hourly traffic rate of 105 is low compared to the road's potential to handle additional traffic (see Chapter 4, Impacts to Transportation).

# Socioeconomics

Jackson and Josephine counties have been selected as the impact area for the purpose of addressing socioeconomic effects. The Hellgate Recreation Area is located entirely within Josephine County; however, travel and expenditure patterns suggest that the major trade centers of Medford and Ashland are utilized by visitors to the area. These communities are located in Jackson County, thus making it necessary to include that county within the impact area.

Josephine County is a relatively rural county with over 70 percent of the population living in unincorporated areas. Estimated 1996 population in the county totaled 72,000, with 20,255 living in Grants Pass and 1,300 in Cave Junction (Wineburg 1997). Population estimates are unavailable for the unincorporated communities that are located along the Rogue River and within the Hellgate Recreation Area. Jackson County is substantially more populated; estimated 1996 population totaled 168,000 (Wineburg 1997). Jackson County has 11 incorporated cities and towns: Ashland, Butte Falls, Central Point, Eagle Point, Gold Hill, Jacksonville, Medford, Phoenix, Rogue River, Shady Cove, and Talent. Ashland and Medford, both located in the I-5 corridor, are the major trade centers. Less than 40 percent of Jackson County residents live in unincorporated areas.

Tables 3-16 and 3-17 show employment and income by type and industry for Jackson and Josephine counties. This data has been provided to add perspective to the estimates of employment and income generated by the input-output model developed for use in this planning process. See Socioeconomics, Chapter 4, for a general description of the model and its use.



The Hellgate Recreation Area is a popular recreation area for visitors and local residents. Visitation for 1997 has been estimated at over 719,000 (Austermuehle 1997). Use by visitors (those traveling more than 200 miles from home to the Hellgate Recreation Area) and residents varied by type of activity (Shindler and Shelby 1993). Visitors represented 58 percent of motorized tour boat users and 32 percent of floaters. Angling use is dominated by local residents, with only 20 percent of anglers traveling more than 200 miles from home. In general, expenditures by individual visitors are higher and have a greater economic impact than those of residents. This is because visitors have a greater propensity to use commercial lodging, dine out, and participate in commercial recreational activities, such as guided floats and motorized tour boating. The economic effect of these expenditures is greater because it represents money earned outside the area entering the local economy and creating jobs and income.

Given the 1997 level of visitation, an estimated 1,713 jobs and \$31.32 million of place-of-work income is generated in Jackson and Josephine counties. Among the ten activity types, motorized tour boating generates the most jobs and place-of-work income and day use is a distant second. See Tables 4-9 and 4-10 for specific estimates of each activity and lodging type.

## **Environmental Justice**

Executive Order 12898 (1994) provides that "each Federal agency make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health and environmental effects of its programs, policies, and activities on minority populations and low-income populations." Environmental Justice "is achieved when everyone, regardless of race, culture, or income, enjoys the same degree of protection from environmental and health hazards and equal access to a healthy environment in which to live, work, and play" (Whorton and Sohocki 1996).

## **Management Costs**

Cost estimates were developed for each alternative (see Table 4-11). Alternative B represents the current BLM River program budget, excluding one-time (new) development costs. Estimates are given in 1994 dollars. Development costs are one-time costs, though they may be spread over several years. Recurrent costs (maintenance and staffing) occur every year. Staffing costs are expressed as a dollar figure based on a work month cost of approximately \$3,500. Development cost of structures is based on a cost of approximately \$100/square feet.

## **Gross Revenue**

### **Commercial Permittees**

As part of the stipulations of each Special Recreation Permit issued to commercial recreation providers operating in the planning, there are regulations and procedures that require permittees to report the gross revenues associated with their operations as sanctioned by the permit.

Gross revenues are defined as those fees actually charged to the customer for services performed or delivered on or upon the federally-controlled land or waters. These gross revenues are eligible for certain discounts that relate to time spent off federal land, other non-activity based fees, and other charges incurred by the customer for services that are not dependent on the privileges granted by the Special Recreation Permit.

After appropriate discounts have been applied, the adjusted gross revenue reported by the permittee is added to the permittee's annual billing. If no discounts are appropriate due to the



particular circumstances involved with the commercial activity, then a billing rate of 3 percent is applied to the permittees reported fees.

At the end of the permittee's operating season, all reported fees, minus any applicable discounts, are calculated and the permittee is billed.

Aggregate gross revenues for commercial activity within the RAMP area are approximately \$2,400,000 yearly. After calculating appropriate discounts and applying them to the billing system, approximately \$55,000 is collected yearly by the BLM in commercial use fees.

## **Private Permittees**

If a permit system were established for private use and it included a fee for the permit, the fee would be designated to recoup the costs of permit issuance and administration. The fee would be fixed and there would be no applicable discounts. All fee revenues would be deposited into appropriate accounts for disposition at the end of each fiscal year.







# Tables, Maps, and Figures

159



## Chapter 3

# Tables, Maps, and Figures



**Table 3-1. Special Status Species in the Hellgate Recreation Area (Vertebrates)**

Species (Common Name)	Status <sup>1</sup>	Presence <sup>2</sup>	Survey Level <sup>3</sup>	Habitat Condition <sup>4</sup>	Monitor Y/N	Future Survey Efforts Y/N
Gray wolf	FE,SE	A	N	H	N	N
White-footed vole	BS,SP	S	0	U	N	N
Fisher	BS,SC,AS	D	1	I	N	N
Wolverine	BS,ST	A	N	N	N	N
American marten	SC,AS	S	0	I	N	N
Ringtail	SU	D	1	Y	N	N
Red tree vole	SM	D	3	Y	N	N
Peregrine falcon	FE,ST	D	3	Y	Y	Y
Bald eagle	FT,ST	D	3	Y	Y	Y
Northern spotted owl	FT,ST	D	3	Y	Y	Y
Marbled murrelet	FE,SC	S	3	Y	Y	Y
Northern goshawk	BS,SC,AS	S	3	Y	Y	Y
Mountain quail	BS	D	5	Y	N	N
Pileated woodpecker	SC,AS	D	5	Y	N	N
Lewis' woodpecker	SC,AS	D	5	Y	N	N
White-headed woodpecker	SC,AS,BF	A	N	N	N	N
Flammulated owl	SC,AS,BF	S	0	Y	N	Y
Purple martin	SC,AS	S	0	H	N	N
Tri-colored blackbird	BS,SP	S	0	Y	N	N
Great gray owl	SV,AS,SM	D	5	U	N	N
Western bluebird	SV,AS	D	3	Y	N	N
Acorn woodpecker	SU	D	5	Y	N	N
Pygmy owl	SU	D	3	Y	N	N
Bank swallow	SU	D	5	U	N	N
Townsend's big-eared bat	BS,SC	D	3	Y	Y	Y
Yuma myotis	BS	D	3	Y	Y	Y
Long-eared myotis	BS,BU	S	3	Y	Y	Y
Long-legged myotis	S	S	3	Y	Y	Y
Silver-haired bat	BF	S	3	Y	Y	Y
Fringed myotis	BS,SV,BF	D	3	Y	Y	Y
Pallid bat	SC,AS	D	3	H	Y	Y
Western pond turtle	BS,SC	D	3	I	Y	Y
Del Norte salamander	BS,SV,SMBF	D	3	Y	N	Y
Foothills yellow-legged frog	BS,SU	D	3	Y	N	N
Red-legged frog	BS,SU	S	0	H	N	N
Tailed frog	SV,AS	S	0	U	N	N
Variegated salamander	SV	S	2	I	N	Y
Black salamander	SP,AS	D	2	U	N	N
Clouded salamander	SC,AS	S	0	I	N	N
Northern sagebrush lizard	BS	S	0	Y	N	N
Common kingsnake	SP,AS	D	1	Y	N	N
Sharptail snake	SP	S	0	Y	N	N
California mountain kingsnake	SP,AS	D	1	Y	N	N

**1-STATUS:**

FE--Federal Endangered  
 FT--Federal Threatened  
 FP--Federal Proposed  
 FC--Federal Candidate  
 SE--State Endangered  
 ST--State Threatened  
 SC--ODFW Critical  
 SV--ODFW Vulnerable  
 SP--ODFW Peripheral or Naturally Rare  
 SU--ODFW Undetermined  
 BS--Bureau Sensitive  
 BF- Buffer Species  
 AS--Assessment Species (BLM)

**2-PRESENCE:**

S--Suspected, habitat present  
 U--Uncertain  
 A--Absent  
 D--Documented

**3-SURVEY LEVEL:**

N--No surveys needed  
 0--No surveys done  
 1--Literature search only  
 2--One field search done  
 3--Some surveys completed  
 4--Protocol completed  
 5--Opportunistic sightings

**4-HABITAT CONDITION:**

H--Historic  
 N--None, out of species range  
 Y--Suitable for stable populations  
 U--Unknown  
 I--Suspect negative impacts



**Table 3-2. Special Status Species in the Hellgate Recreational Area (Invertebrates)**

Species (Common Name)	Status <sup>1</sup>	Presence <sup>2</sup>	Survey Level <sup>3</sup>	Habitat <sup>4</sup>	Monitor Y/N
Burnells' false water penny beetle	BS	U	O	U	N
Denning's Agapetus caddisfly	BS	U	O	U	N
Green Springs Mtn. Farulan caddisfly	BS	A	N	N	N
Schuh's Homoplectran caddisfly	BS	U	O	U	N
Obrien Rhyacophilan caddisfly	BS	A	O	U	N
Siskiyou caddisfly	BS	S	O	U	N
Alsea Ochrotichian Micro caddisfly	BS	S	O	U	N
Oregon pearly mussel	BS	U	O	U	N
Franklin's bumblebee	BS	U	O	U	N
<div> <div> <b>1-STATUS:</b>  FE--Federal Endangered  FT--Federal Threatened  FP--Federal Proposed    FC--Federal Candidate  SE--State Endangered  ST--State Threatened  SC--ODFW Critical  SV--ODFW Vulnerable  SP--ODFW Peripheral or Naturally Rare  SU--ODFW Undetermined  BS--Bureau Sensitive  BF- Buffer Species  AS--Assessment Species (BLM) </div> <div> <b>2-PRESENCE:</b>  S--Suspected, habitat present  U--Uncertain    A--Absent    D--Documented </div> <div> <b>3-SURVEY LEVEL:</b>  N--No surveys needed  0--No surveys done    2--One filed search done  3--Some surveys completed  4--Protocol completed  5--Opportunistic sightings </div> <div> <b>4-HABITAT CONDITION:</b>  H--Historic  N--None, out of species range    1--Literature search only    U--Unknown  I--Suspect negative impacts </div> <div> Y--  Suita  ble  for  stabl  e  popu  latio  ns </div> </div>					



**Table 3-3. Great Blue Heron Monitoring from Grants Pass to Grave Creek on the Rogue River (provided by ODFW)**

Site	Location	Year	# Nests	# Adults	# Juveniles	Comments
Brushy Chutes	35S-07W-36 SW/NW	1971	5-10	Not recorded	Not recorded	Site appeared to be active
Brushy Chutes	35S-07W-36 SW/NW	1972	32	Not recorded	Not recorded	
Brushy Chutes	35S-07W-36 SW/NW	1982	8	Not recorded	Not recorded	
Brushy Chutes	35S-07W-36 SW/NW	1994	11	8	Unknown	Only one site visit made in March
Carpenter Island	35S-08W-01 SW/NE	1972	>15	Not recorded	Not recorded	# of nests estimated
Carpenter Island	35S-08W-01 SW/NE	1990	Not recorded	0	0	Old nests in bad repair; no sign of birds
Hale	36S-07W-13 SE/NW	1994	2	2	1	New; discovered this year
Hog Creek	36S-07W-13 SE/NW	1971	7	Not recorded	Not recorded	Rookery discovered this year
Hog Creek	36S-07W-13 SE/NW	1972	10	Not recorded	Not recorded	
Hog Creek	35S-07W-11 SW	1990	0	0	0	No nests or birds found
Robertson Bridge	35S-07W-22	1990	Not recorded	16	10	
Rocky Riffle	34S-08W-36 SE/NW	1982	6	Not recorded	Not recorded	
Rocky Riffle	34S-08W-36 SE/NW	1990	5	3	8	
Rocky Riffle	34S-08W-36 SE/NW	1994	6	4	0	Last visit 4/30/94
Taylor Creek	35S-07W-5&6	1990	5	5	2	
Twin Peak Riffle	34S-08W-25 SW/NE	1990	0	0	0	No nests or birds found
Two Bit Riffle	35S-07W-14 SE	1982	12	Not recorded	Not recorded	
Two Bit Riffle	35S-07W-14 SE	1990	11	7	15	



**Table 3-3. Great Blue Heron Monitoring from Grants Pass to Grave Creek on the Rogue River (provided by ODFW)**

Site	Location	Year	# Nests	# Adults	# Juveniles	Comments
White Horse Park Riffle	36S-06W-19 NW/NW	1996	15	10	16	
White Horse Park Riffle	36S-06W-19 NW/NW	1997	16	30	23	
White Horse Park Riffle	36S-06W-19 NW/NW	1999	20	15	None	observed - too early for juveniles

**Table 3-4. Fall Neotropical Migratory Bird (NTMB) Species List  
Wildlife Images Site - Hellgate Recreation Section**

Western/ Pacific slope flycatcher	Common yellowthroat
Willow flycatcher	Black-headed grosbeak
Dusky flycatcher	Spotted towhee
Western wood peewee	Savannah sparrow
Scrub jay	Fox sparrow
Black-capped chickadee	Song sparrow
Common bushtit	Lincoln's sparrow
Brown creeper	White-throated sparrow
Bewick's wren	Golden-crowned sparrow
Winter wren	White-crowned sparrow (Puget Sound/Gambel's)
Marsh wren	Dark-eyed junco (OR)
Ruby-crowned kinglet	Northern oriole (Bullock's)
Swainson's thrush	Western tanager
Varied thrush	Lesser goldfinch
American robin	American goldfinch
Wrentit	Purple finch
Cedar waxwing	Northern flicker
Huttons vireo	Hairy woodpecker
Warbling vireo	Downy woodpecker
Yellow warbler	Red-breasted sapsucker
Black-throated Gray warbler	Red-shafted flicker
Yellow-rumped warbler (Myrtle/Audubon)	Nashville warbler
MacGillivray's warbler	Orange-crowned warbler
Pygmy owl	Common yellowthroat



**Table 3-5. Visitor Use Conflicts in the Hellgate Recreation Area**

Concern	Total	Motorized Tour Boats	Floaters	Anglers
Is rude behavior a problem on the river?	(%)	(%)	(%)	(%)
No	38	51	38	30
Minor problem	39	33	43	40
Problem or major problem	23	16	19	30
Are conflicts among users a problem?				
No	30	40	28	26
Minor problem	40	42	44	36
Problem or major problem	30	18	28	38
Did others interfere with your trip (% yes)	43	21	38	60
If yes, in what ways? <sup>1</sup>				
Jet boat activity	51	16	55	57
Crowded conditions	23	51	29	14
Behavior	19	29	11	20
Safety	6	4	3	8
Ecological impacts	1	0	1	1
If yes, what group(s) were responsible? <sup>2</sup>				
Jet boaters	72	32	68	83
Floaters	32	55	43	23
Anglers	17	26	14	16

1-Jet boat activity: speed, noise and wakes.

Crowded conditions: too many people, boats, or large groups.

Behavior: rude behavior, noise, misuse of alcohol, poor river etiquette.

Safety: unsafe boating and boat anchoring.

Ecological impact: user-caused impacts (e.g., erosion, vegetation, fire rings, litter)

2-Respondents could name more than one group.

SOURCE: Shindler and Shelby 1993, pg. 50.



**Table 3-6. Problem Identification for the Hellgate Recreation Area<sup>1</sup>**

Condition	Total (%)	Motorized Tour Boats (%)	Floaters (%)	Anglers (%)
<u>Environmental Conditions</u>				
Amount of litter	41	19	48	49
Not enough toilets	37	24	41	40
Condition of toilets	26	-	25	26
Presence of human waste	24	-	26	22
<u>Capacity Problems</u>				
Too many excursion jet boats	52	15	53	73
Congestion at put-in/take-out	29	-	37	23
Too many rafter/kayakers	18	15	17	20
Too many anglers	8	5	2	13
<u>Social Conditions</u>				
Safety concerns about motorized boats	44	18	47	57
Use of alcohol on river	34	31	37	33
Conflicts between users	30	18	28	38
Better handicapped access	29	25	28	30
Noise levels (motors, stereos)	26	15	32	29
Rude behavior by others	23	16	19	30
<u>Angling Conditions</u>				
Lack of fish	-	-	-	78
Presence of squaw fish	-	-	-	53
Competition for fishing holes	-	-	-	34

1-Percentage of users who feel conditions are a problem or major problem.



**Table 3-7. Boating Safety Issues in the Hellgate Recreation Area<sup>1</sup>**

Issues	Total	Motorized Tour Boats	Floaters	Anglers
	% Agree	% Agree	% Agree	% Agree
High speed of motorized boats	48	13	43	73
Boat wakes are too big	45	11	37	72
Too little space to maneuver excursion jet boats in some locations	45	15	49	61
Operation of excursion jet boats	41	08	38	63
Operation of other motor boats	34	14	34	46
Boats pass too close to rafters and other boats	32	8	39	41
Use of alcohol on river	30	21	35	31
Too much floating traffic	17	13	18	19
There are no boating safety problems I'm aware of	24	48	18	13
Do you wear a life vest on the river?	80	70	95	68

1- Percentage of users who feel conditions are a problem or major problem.



**Table 3-8. Existing Informal Trails**

Trail Name	Length	Use	Access
East Cliffs Trail	1.5 miles	Multiple use. Day use only.	Destination trail with high scenic vistas on the right bank of the river. Access from Robertson Bridge to an area across from Little Pickett Creek.
Matson to Ferry Trail	.75 miles	Multiple use. Day use only.	Ridgetop trail located on the right bank of the river from Matson Park downstream to private property. Old road was cleared by Boy Scouts and leads to a Boy Scout camp.
Hellgate Trail	0.5 miles	Hiking. Day use and overnight.	An existing trail along the left bank used by anglers from Hellgate Bridge upstream to Hellgate Canyon. Access is from Merlin-Galice Road at Hellgate Bridge.
Stratton Creek Trail	1.0 miles	Hiking. Day use and overnight.	An existing trail used by anglers from Hellgate Recreation Site downstream to Taylor Creek Gorge. Access from Hellgate Recreation Site.
Buckhorn Mountain Trail	2.5 miles	Multiple use. Day use and overnight.	Trail on existing road leading to an historic mining area above the river on the left bank. Access is from Merlin-Galice Road near Hellgate Bridge.
Robert Dean Placer Mine Trail	8.0 miles	Multiple use Day use and overnight.	Trail is along existing trails, roads, and mining ditches. Trail is on the right bank from near Hellgate Recreation Site to Robert Dean Placer Mine.
Whitehorse Nature Trail	1.5 miles	Hiking. Day use only.	Existing trail begins in the day use area in Whitehorse Park near the picnic shelter and loops through both BLM and Josephine County Parks land.
Umpqua Joe Trail	5.0 miles	Hiking. Day use only.	This trail exists on Josephine County Parks land within the river corridor. Access is from Merlin-Galice Road across from Indian Mary Park.



**Table 3-9. Housing Densities per River Mile in the Hellgate Recreation Area (1970)**

River Mile	Left Bank Houses	Right Bank Houses
Grave Creek		
69 - 70	0	0
70 - 71	1	0
71 - 72	16	0
72 - 73	6	0
73 - 74	1	0
74 - 75	0	0
75 - 76	1	0
76 - 77	0	0
77 - 78	0	0
78 - 79	0	0
79 - 80	4	1
80 - 81	2	0
81 - 82	2	0
82 - 82	11	4
83 - 84	8	1
84 - 85	6	1
85 - 86	0	0
86 - 87	0	1
87 - 88	8	4
88 - 89	0	0
89 - 90	0	0
90 - 91	0	0
Applegate		
91 - 92	0	0
<b>Total</b>	<b>66</b>	<b>12</b>
<b>Average</b>	<b>2.87</b>	<b>.52</b>



**Table 3-10. Motorized Tour Boat Business, Visitor Use, Number of Boat Runs, and Boat Trips (1973-1994)**

Year	Visitor Use		Boat Runs		Boat Trips		Use: Trip Ratio
	Numbers	% Change	Numbers	% Change	Numbers	% Change	
1973	8,000						
1974	5,000	-37					
1975	6,000	+20					
1976	6,000	0					
1977	12,000	+100					
1978	15,900	+33					
1979	18,800	+18					
1980	18,700	-1					
1981	19,200	+3					
1982	20,400	+6					
1983	19,800	-3					
1984	19,200	-3					
1985	23,151	+21	330	-	1,067	-	22:1
1986	32,000	+38	440	+33	*942	-12	34:1
1987	38,500	+20	510	+16	*1,091	+16	35:1
1988	52,000	+35	750	+47	*1,605	+47	32:1
1989	62,185	+20	887	+18	*1,898	+18	33:1
1990	64,084	+3	741	-16	1,518	-20	42:1
1991	72,856	+14	753	+2	1,661	+9	44:1
1992	68,058	-7	704	-6	1,571	-5	43:1
1993	68,135	0	763	+8	1,565	0	44:1
1994	70,356	+3	721	-5	1,604	+3	44:1
Average	53,441	+15	660	+11	1,452	+6	37:1

SOURCE: USDI, BLM, MDO, GPRA 1994.

NOTE: Averages are based on the years 1985 through 1994.

\*Approximations using a known boat run to boat trip ratio of 1:2.14 for the years 1990-1993.



**Table 3-11. Total Water-Based Visitor Use in the Hellgate Recreation Section (1991)**

Month	Bank Angler	Boat Angler	Float	Jet Boat	Motorized Tour Boats	Total
JANUARY	440	178	15	5	0	638
FEBRUARY	460	938	25	14	0	1,437
MARCH	666	1,090	53	10	0	1,819
APRIL	96	87	154	15	0	352
MAY	454	96	1,349	343	3,437	5,679
JUNE	205	84	3,116	115	11,395	14,915
JULY	89	43	9,801	22	21,222	31,177
AUGUST	354	233	10,651	97	23,661	34,996
SEPTEMBER	676	956	3,191	122	13,141	18,086
OCTOBER	385	585	12	15	0	997
NOVEMBER	272	171	7	10	0	460
DECEMBER	112	40	5	5	0	162
TOTAL	4,209	4,501	28,379	773	72,856	110,718
% OF USE	4%	4%	26%	1%	65%	100%

SOURCE: USDI, BLM, MDO 1995.



**Table 3-12. Total Watercraft in the Hellgate Recreation Section (1991)**

Month	Raft	Inflatable Kayak	Kayak	Drift Boat	Jet Boat	Motorized Tour Boat	Other <sup>1</sup>	Total
JANUARY	3	0	0	91	2	0	0	96
FEBRUARY	5	0	0	395	8	0	0	408
MARCH	13	0	2	443	5	0	0	463
APRIL	39	0	0	61	8	0	0	108
MAY	217	327	24	37	116	96	14	831
JUNE	404	1,129	80	42	42	280	36	2,013
JULY	1,201	3,685	85	47	60	461	128	5,667
AUGUST	1,320	4,013	99	85	34	514	98	6,163
SEPTEMBER	414	1,134	34	380	55	310	36	2,363
OCTOBER	6	0	0	268	8	0	7	289
NOVEMBER	2	0	0	91	5	0	0	98
DECEMBER	2	0	0	40	2	0	0	44
TOTAL	3,626	10,288	324	1,980	345	1,661	319	18,543
% OF USE	19%	55%	3%	11%	2%	9%	1%	100%

SOURCE: USDI, BLM, MDO 1995.

<sup>1</sup>-Canoes, inner tubes, durt bags.



**Table 3-13. How Much of a Problem Do You Find the Sound Generated by Each of the Following To Be?**

Percentage of Landowners Indicating Noise is a Problem

	None	Minor	Significant	Major
<b>Nonmotorized River</b>				
Traffic	56.2	43.8	0.0	0.0
<b>Motorized Tour</b>				
Boats (jet boats)	6.2	25.0	14.1	54.7
<b>Private Motorized</b>				
Boats	7.8	51.6	31.2	9.4
Hikers	66.1	33.9	0.0	0.0
Campers	53.2	32.3	12.9	1.6
Anglers	62.5	35.9	1.6	0.0

SOURCE: York, Rowland and Salley 1994, pg. 13.

**Table 3-14. Existing Main Access Roads and Bridges**

Road Name	Length (miles)	Surface Type <sup>1</sup>	Road Standard	Maintenance
<b><u>River Segment 1</u></b>				
1. Upper River Road	4.6	Asphalt	2 lane	County
2. Lower River Road	11.5	Asphalt	2 lane	County
3. Riverbanks Road	9.2	Asphalt	2 lane	State
4. Robertson Bridge	N/A	Asphalt	2 lane	County
5. Robertson Bridge Road	2.25	Asphalt	2 lane	County
6. Azalea Drive	0.90	Asphalt	2 lane	County
7. Merlin-Galice Road (to Hog Creek)	8.1	Asphalt	2 lane	County
<b><u>River Segment 2</u></b>				
1. Merlin-Galice Road	10.40	Asphalt	2 lane	County
2. Hellgate Bridge	N/A	Asphalt	2 lane	BLM
3. Almeda Road (34-8-13)	3.50	BST	1 lane	BLM
4. Grave Creek Bridge	N/A	Asphalt	1 lane	BLM
5. Mtn. Reuben Road	0.03	BST	1 lane	BLM

1-Bituminous Surface Treatment (BST)



**Table 3-15. Existing Recreation Sites**

Recreation Site Name	Access Road Length (Miles)	Surface Type	Maintenance
<b><u>River Segment 1</u></b>			
1. Whitehorse Park	0.57	BST, ASC, NAT.	County
2. Griffin Park	0.58 (Griffin Road)	BST	County
3. Matson Park	1.90	BST	County
4. Upper Ferry Park	1.52 (Ferry Road)	BST	County
5. Robertson Bridge Parking Area	0.03	BST	County, BLM
<b><u>River Segment 2</u></b>			
1. Jumpoff Joe Fishing Access	0.37	NAT	County
2. Hog Creek Landing	0.27	BST	County
3. Hellgate Overlook		BST	BLM
4. Hellgate Bridge Kiosk		ASC	BLM
5. Hellgate Recreation Site			BLM
6. Indian Mary Park	0.25	BST	County
7. Rainbow Recreation Site	0.06	ASC	BLM
8. Morrison's Lodge			Private
9. Ennis Riffle	0.06	BST	County
10. Carpenter's Island Rec. Site	0.04	ASC	BLM
11. Galice Resort	0.07	BST	Private, County
12. Rocky Bar Rec. Site	0.50	ASC, NAT	BLM
13. Chair Riffle Rec. Site	0.17	NAT	BLM
14. Rand Complex	0.34	BST	BLM
15. Alameda Park	0.10	BST	County
16. Argo Riffle Rec. Site	0.25	ASC, NAT	BLM
17. Grave Creek Boat Landing	0.12	BST	BLM

<sup>1</sup>-Bituminous Surface Treatment (BST); Aggregate Surface Coarse (ASC); Natural Surface (NAT).



**Table 3-16. Employment**

	Jackson County		Josephine County	
	1990	1994	1990	1994
<b>Employment by Place of Work</b>				
Total FT & PT Employment	75,337	85,059	26,603	28,591
<b>By Type</b>				
Wage and Salary Employment	58,846	66,319	19,604	20,894
Proprietor's Employment	16,491	18,740	6,999	7,697
Farm Proprietor's Employment	1,834	1,869	680	692
Nonfarm Proprietor's Employment	14,657	16,871	6,319	7,005
<b>By Industry</b>				
Farm Employment	3,052	3,026	1,047	1,041
Nonfarm Employment	72,285	82,033	25,556	27,550
Ag. Serv., Forestry, Fishing, and Other	994	1,360	493	649
Mining	174	155	117	109
Construction	4,034	4,975	1,334	1,846
Manufacturing	9,933	10,460	4,540	3,758
Transportation and Public Utilities	3,683	3,569	894	971
Wholesale Trade	2,847	3,057	649	756
Retail Trade	16,259	19,187	5,633	6,173
Finance, Insurance, and Real Estate	4,429	4,946	1,648	1,905
Services	19,758	23,867	6,651	7,711
Government and Government Enterprises	10,174	10,457	3,597	3,672

SOURCE: U.S. Department of Commerce.



**Table 3-17. Income**

	Jackson County		Josephine County	
	1990	1994	1990	1994
<b>Earnings by Place of Work</b>				
Total Earnings by Place of Work	1,481,039	1,964,864	465,246	571,651
<b>By Type</b>				
Wages and Salaries	1,085,100	1,400,015	329,621	390,654
Other Labor Income	111,861	155,939	35,309	44,325
Proprietor's Income	284,078	408,910	100,316	136,672
Farm Proprietor's Income	3,535	-1,017	680	1,284
Nonfarm Proprietor's Income	280,543	409,927	99,636	135,388
<b>By Industry</b>				
Farm Earnings	14,797	11,241	2,831	3,634
Nonfarm Earnings	1,466,242	1,953,623	462,415	568,017
Ag. Serv., Forestry, Fishing, and Other	11,866	16,696	6,359	9,001
Mining	2,827	3,579	2,324	2,365
Construction	100,614	147,680	31,274	47,368
Manufacturing	309,637	395,549	103,901	96,393
Transportation and Public Utilities	108,249	117,609	24,257	28,290
Wholesale Trade	77,319	93,489	12,195	15,280
Retail Trade	230,825	311,445	87,394	105,988
Finance, Insurance, and Real Estate	49,237	87,375	13,537	23,634
Government and Government Enterprises	233,409	294,077	75,831	94,245

SOURCE: U.S. Department of Commerce



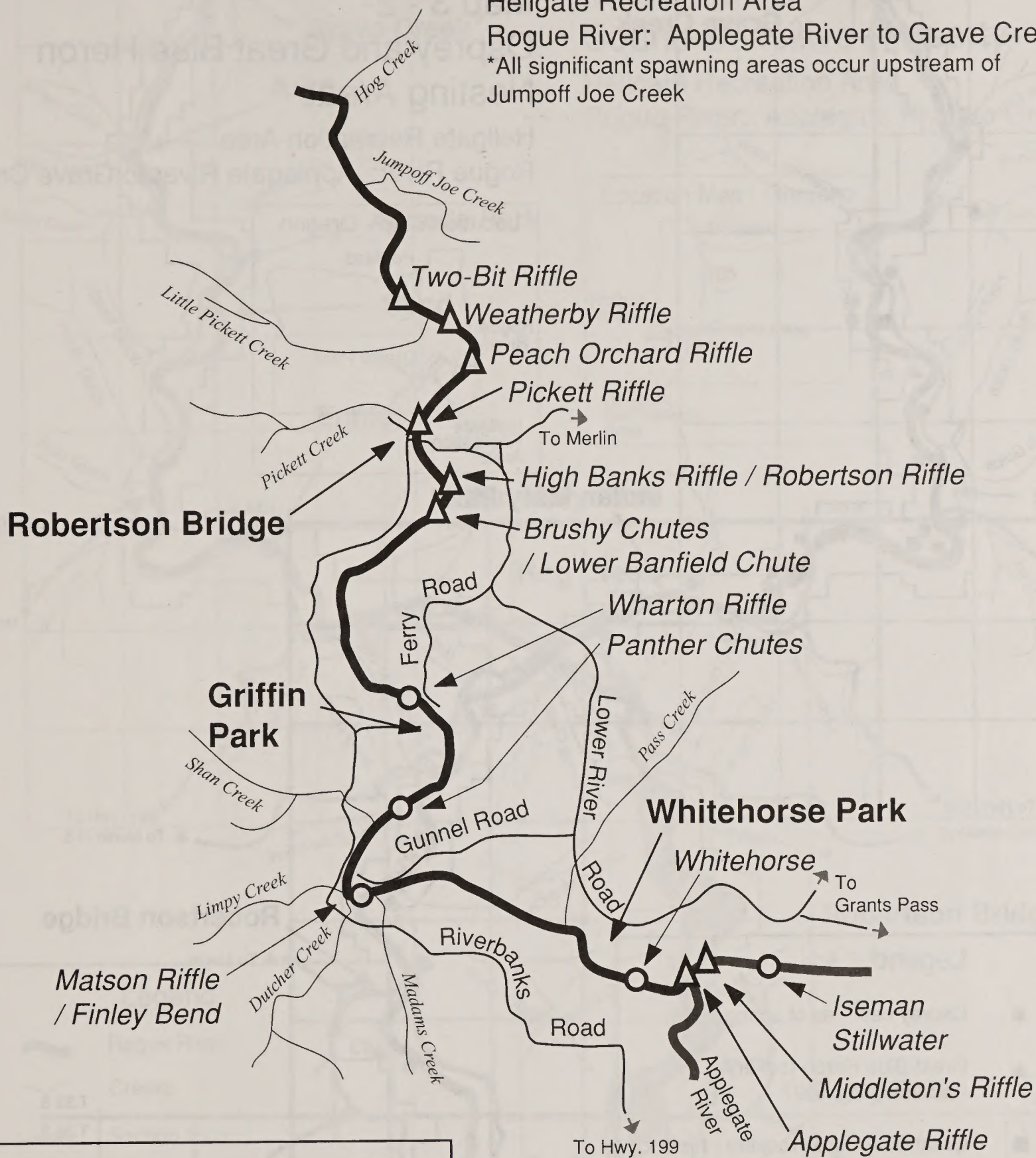
# Map 3 - 1

## Fall Chinook Spawning Areas

Hellgate Recreation Area

Rogue River: Applegate River to Grave Creek

\*All significant spawning areas occur upstream of  
Jumpoff Joe Creek



### Legend

○ Major Fall Chinook Spawning Areas (5)

△ Fall Chinook Spawning Areas

~ Rogue River

~ Creeks

— Roads

N  
1

1 mile

Scale

### Location Map - Oregon





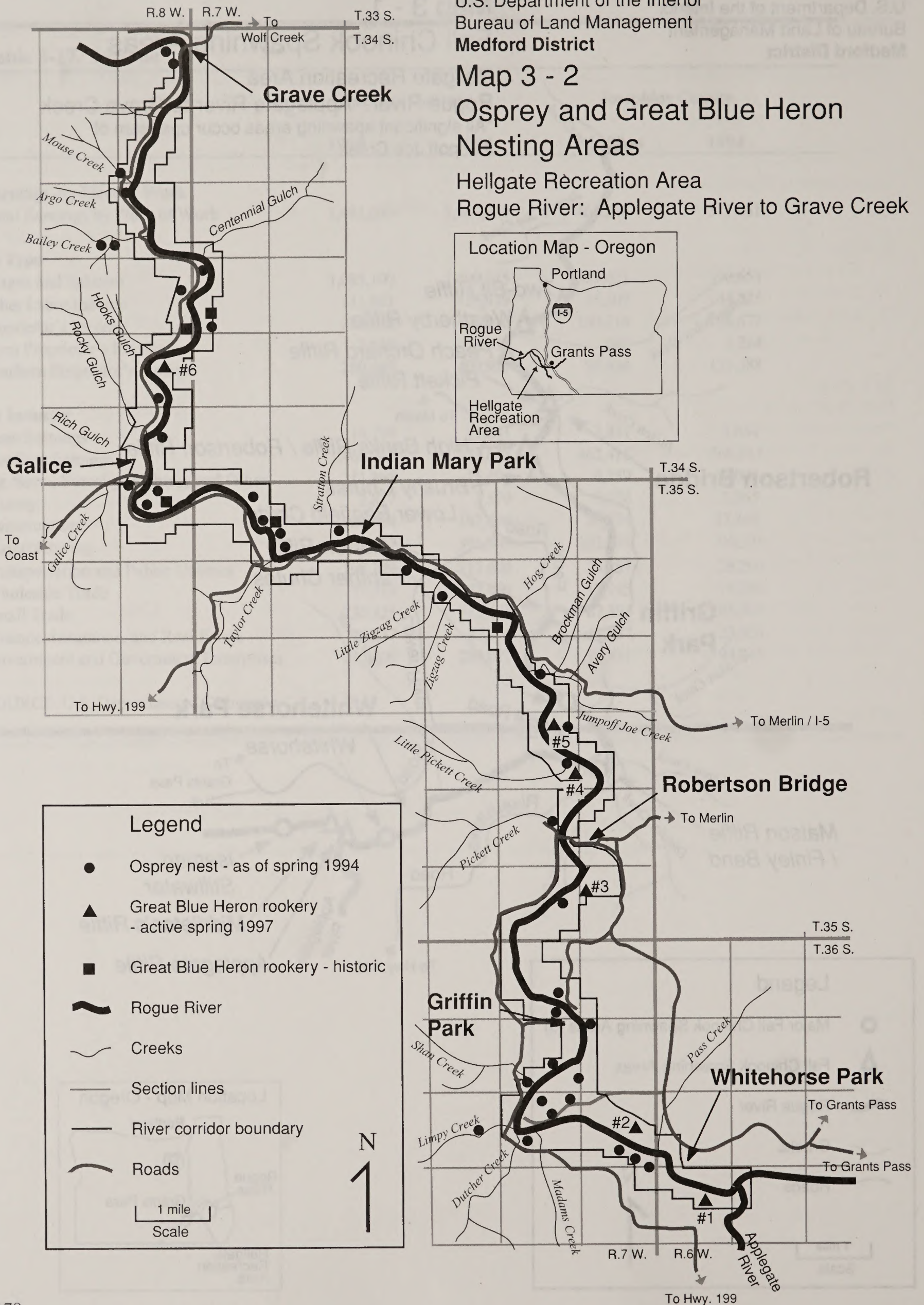
U.S. Department of the Interior  
Bureau of Land Management  
**Medford District**

**Map 3 - 2**

**Osprey and Great Blue Heron  
Nesting Areas**

Hellgate Recreation Area

Rogue River: Applegate River to Grave Creek





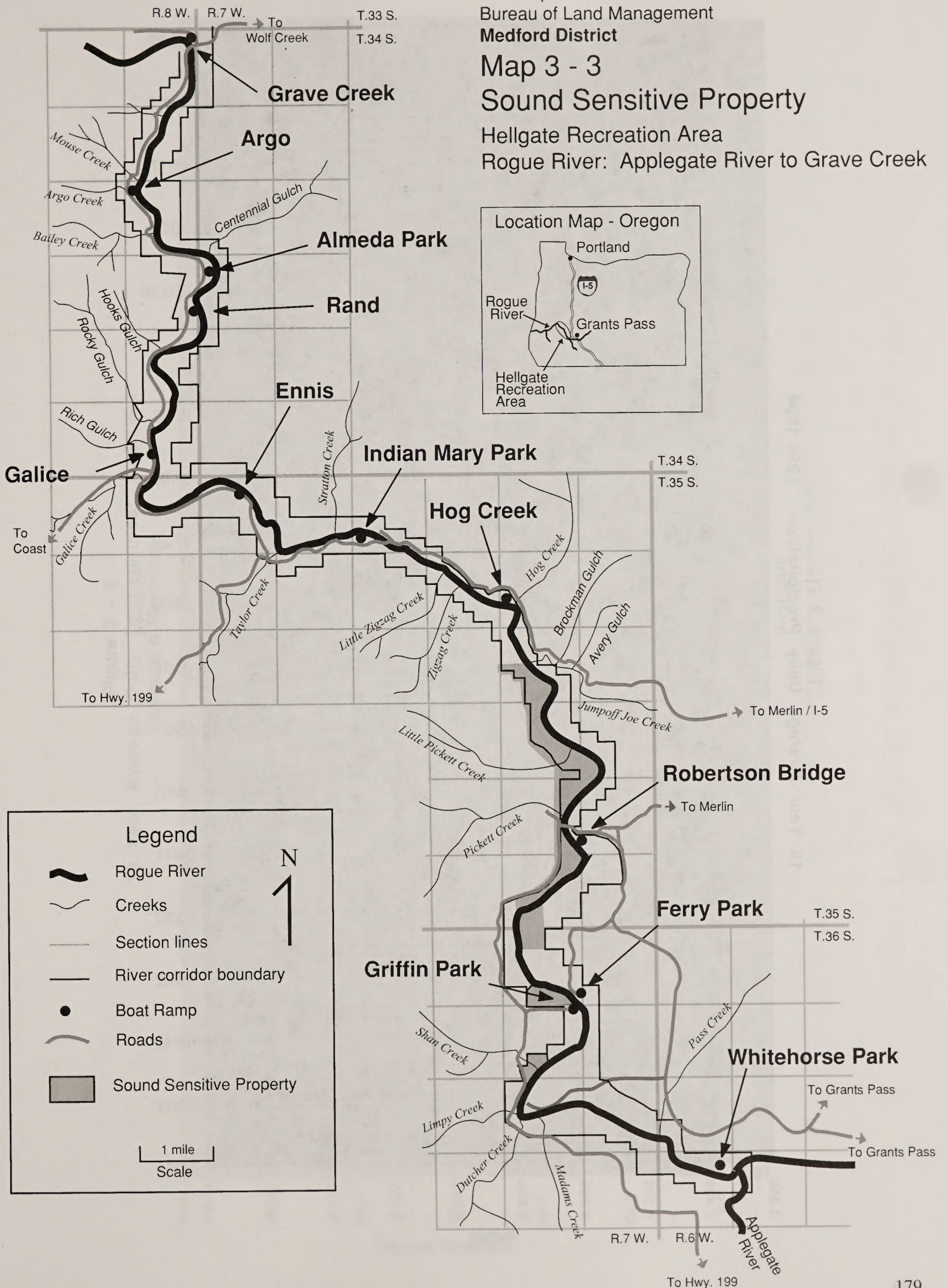
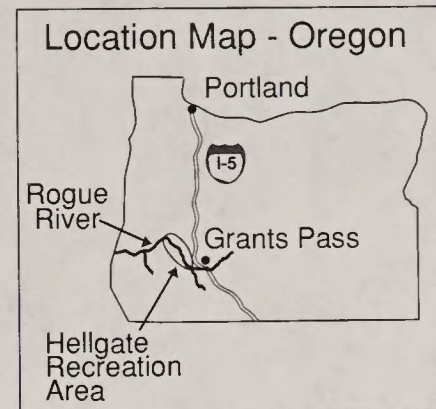
U.S. Department of the Interior  
Bureau of Land Management  
**Medford District**

**Map 3 - 3**

**Sound Sensitive Property**

Hellgate Recreation Area

Rogue River: Applegate River to Grave Creek





**Figure 3 -1**  
**10 Year Average Daily Precipitation: 1985-1994**

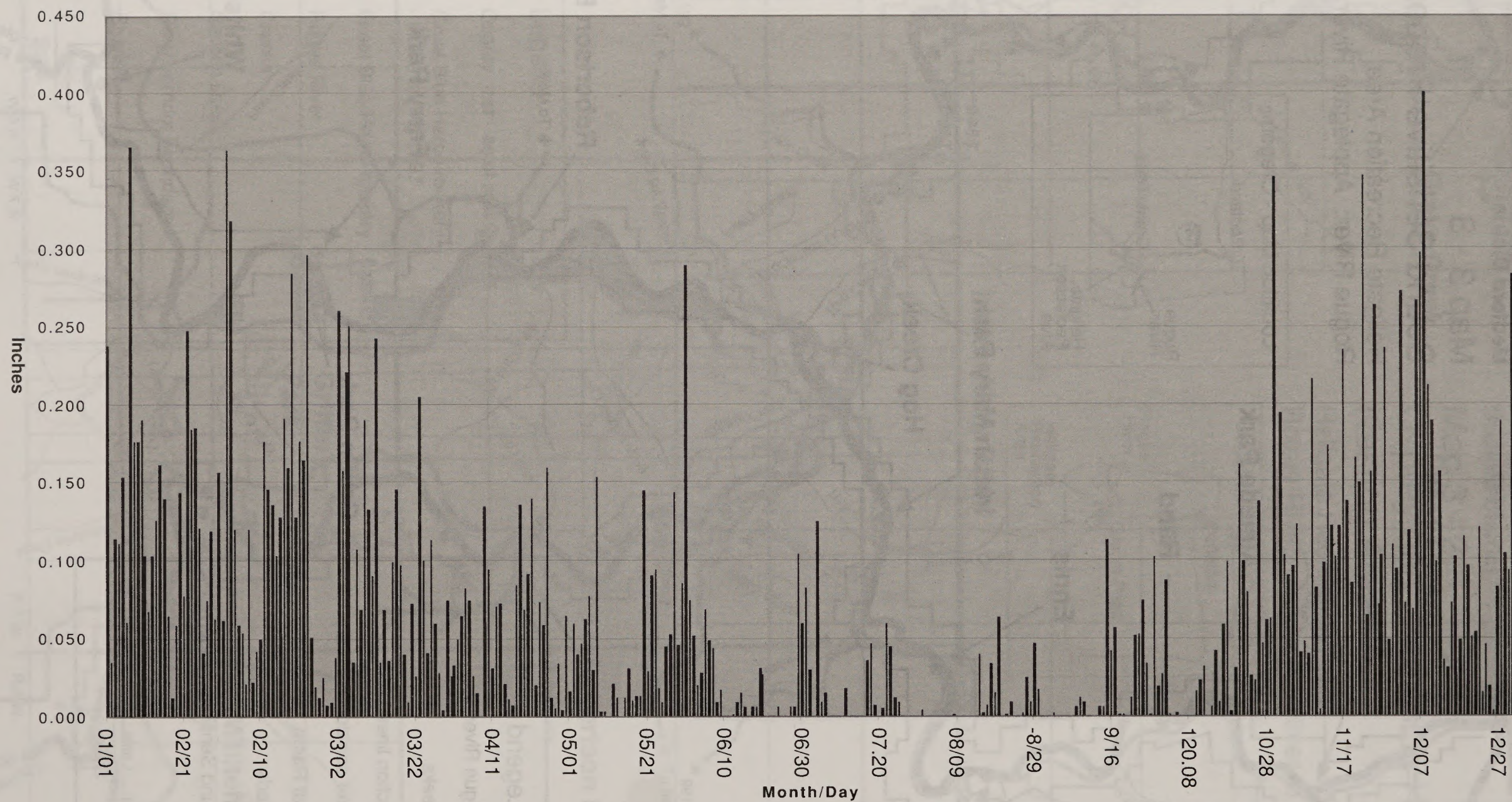
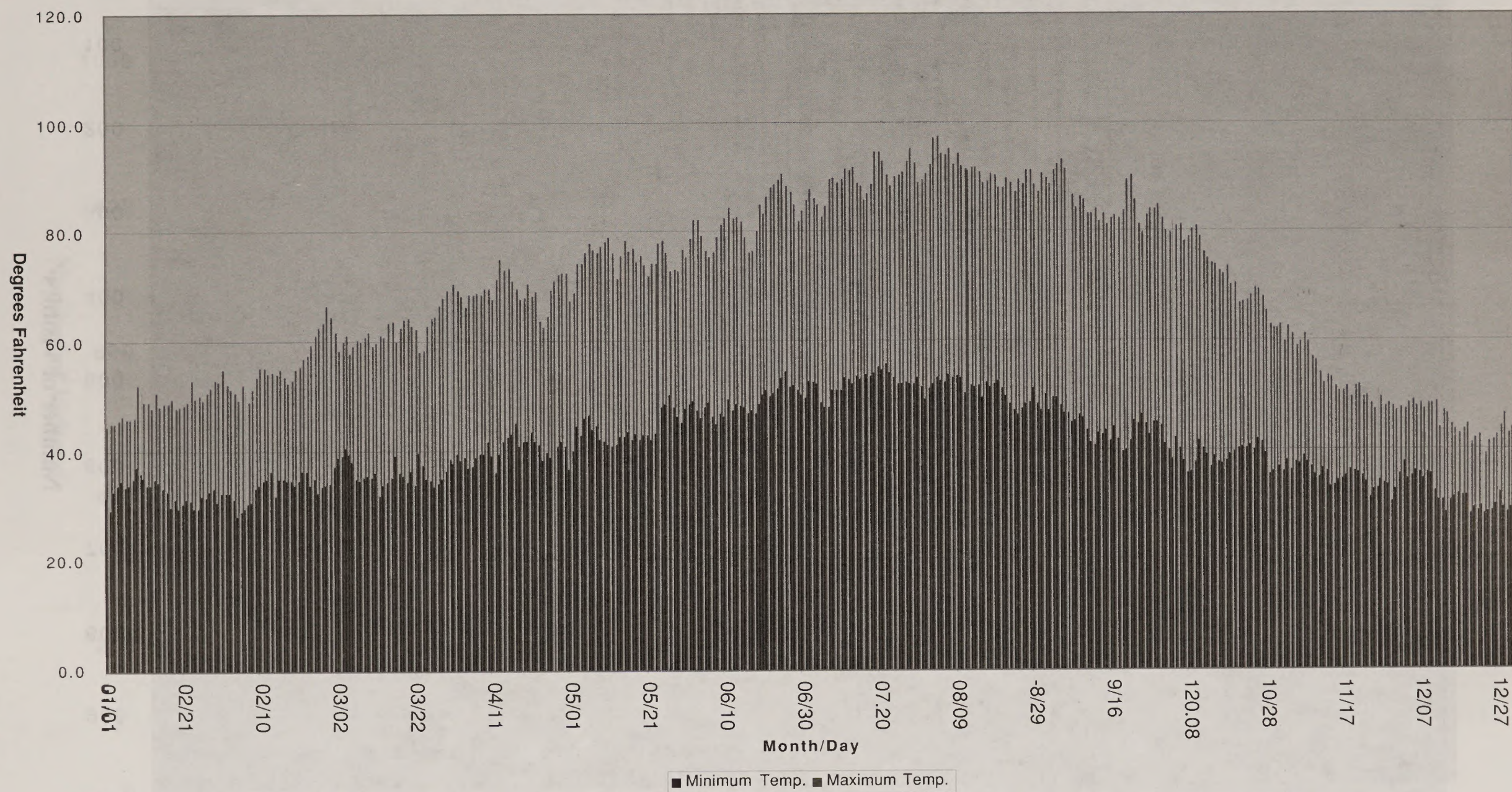


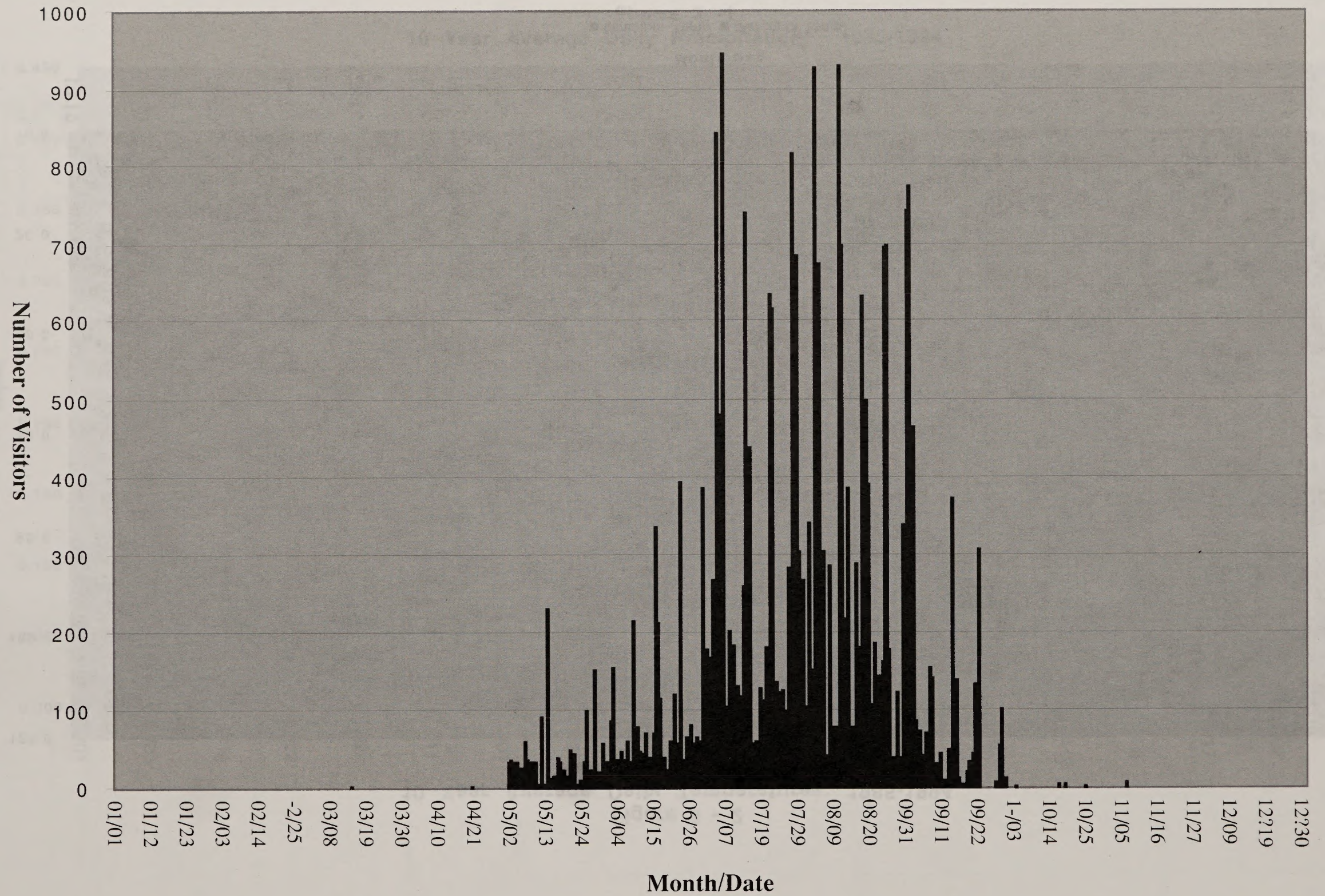


Figure 3 - 2  
10 Year Average Daily Temperatures: 1985-1994  
Minimum & Maximum



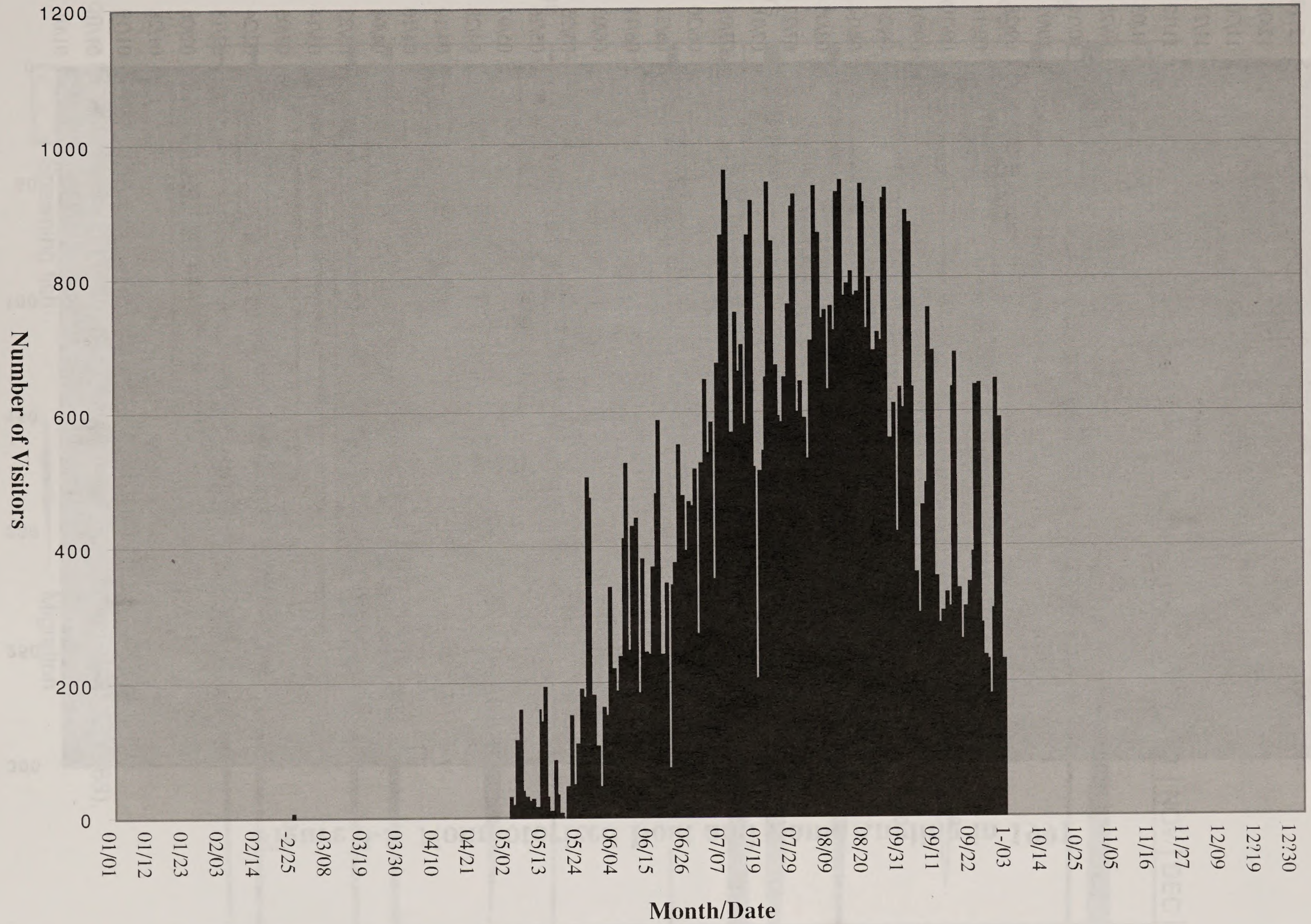


**Figure 3 - 3 Nonmotorized Float Boating in 1991**





**Figure 3 - 4 Motorized Boating in 1991**





**Figure 3-5 Nonmotorized Boat and Bank Angling in 1991**

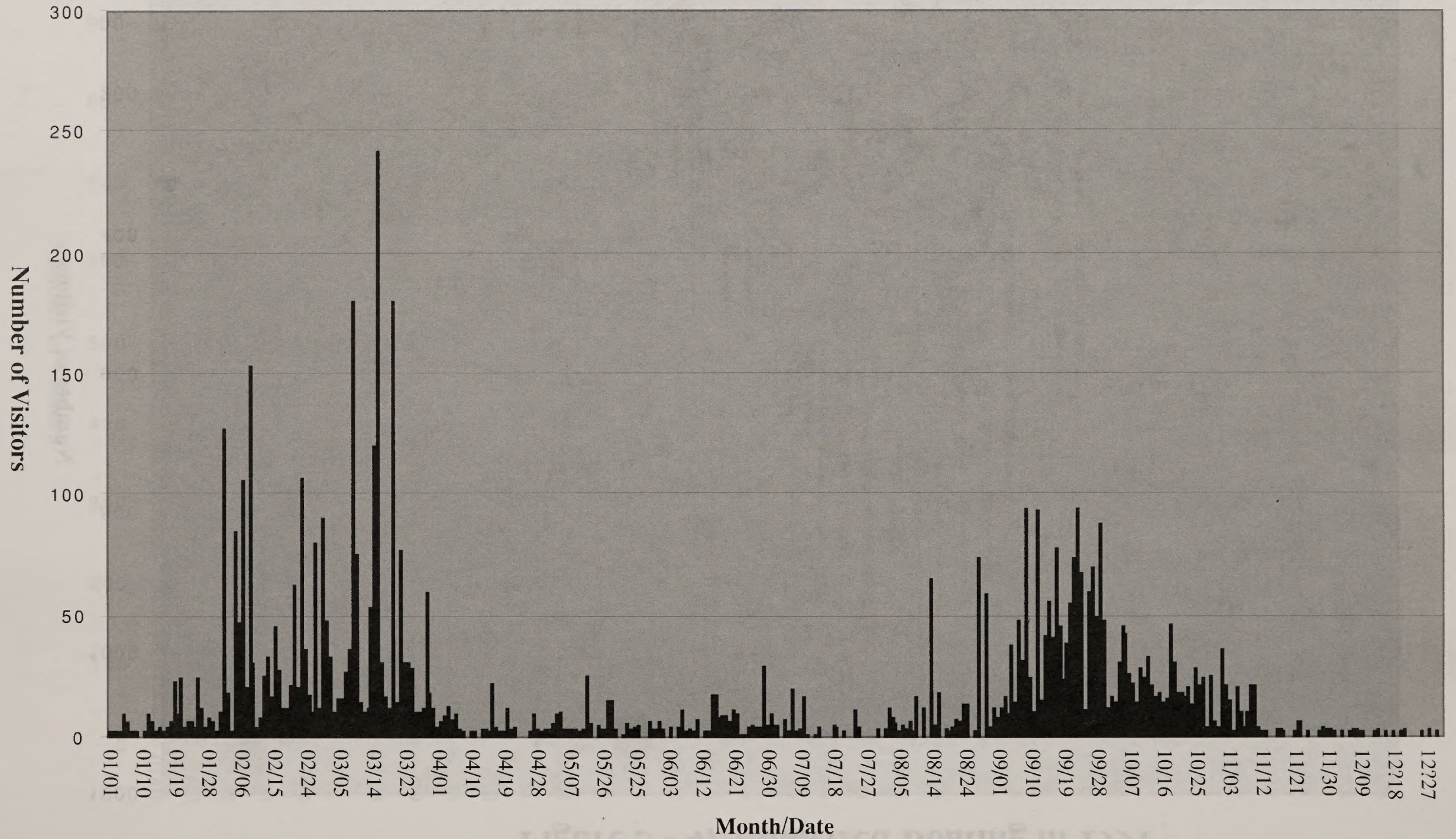
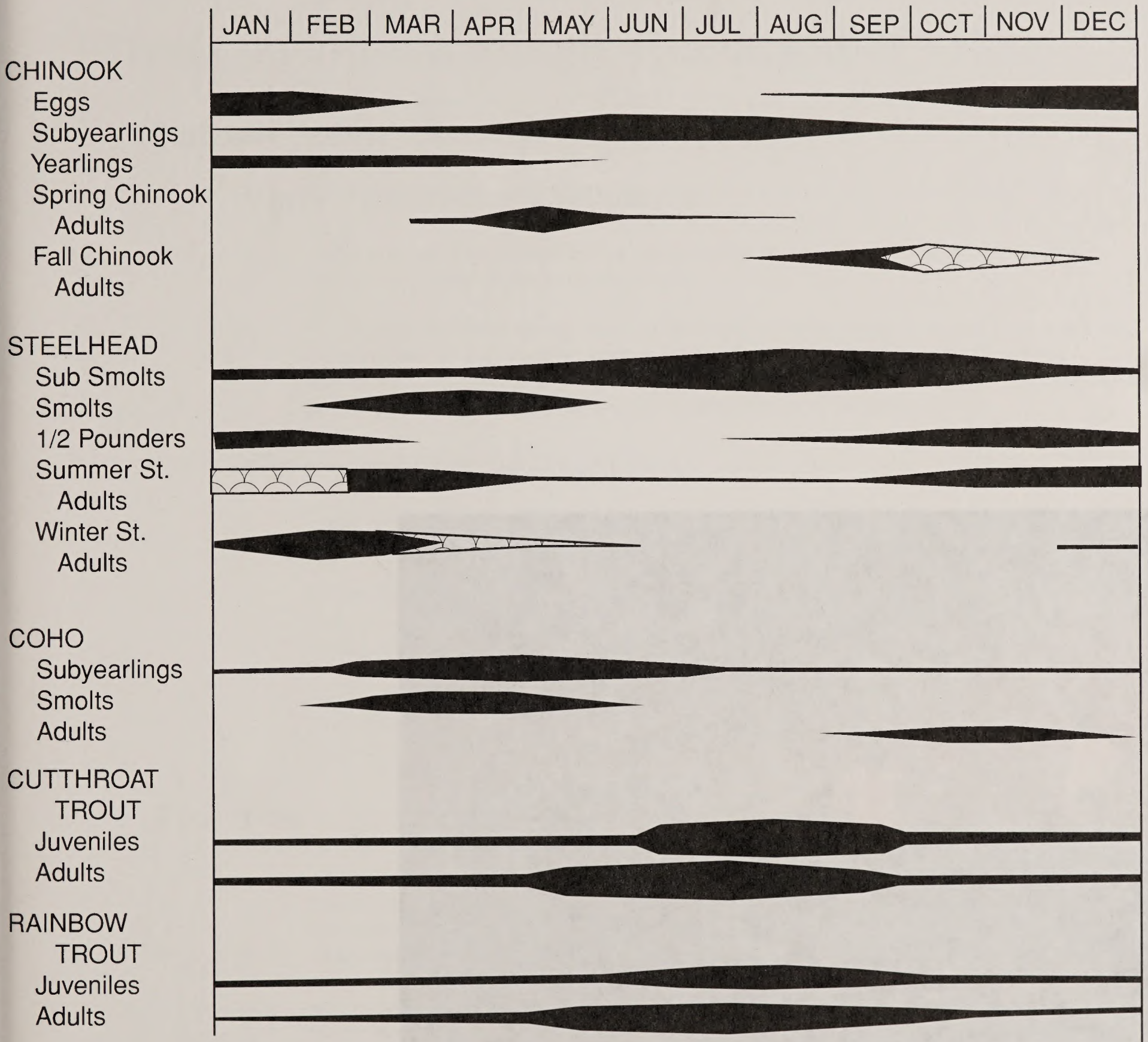
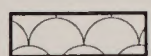




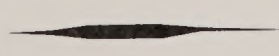
Figure 3 - 6  
Salmonid Spawning and Migration



Abundance of Salmonids by time of year in the mainstem  
Rogue River from Gold Ray Dam to Grave Creek (KM 202-110, MI 125 - 68).

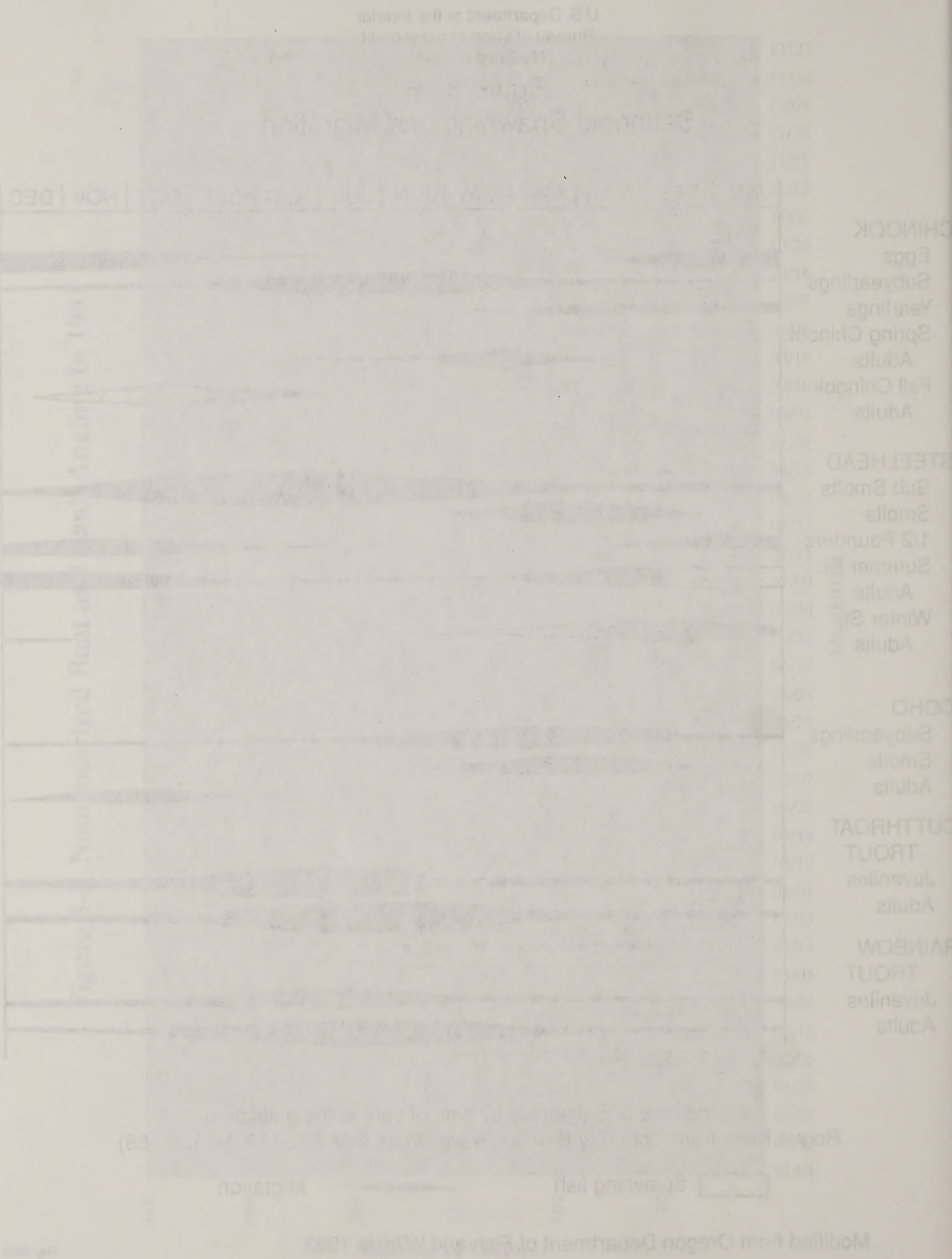


Spawning fish



Migration







# Chapter 4

## Environmental Consequences

### Effects on Outstandingly Remarkable Values

#### Natural Scenic Qualities

##### Visitors' Perceptions and Satisfaction

Visitors' satisfaction is the extent to which the visitor's expectations are met. The study of visitors' perceptions and satisfaction is an important part of the study of visitor behavior.

The majority of visitors rate management of the park as a very important factor in their satisfaction with the park. Approximately 80 percent of all visitors rate the management of the park as a very important factor in their satisfaction with the park. The majority of visitors rate the management of the park as a very important factor in their satisfaction with the park.

##### Effects Common to All Alternatives

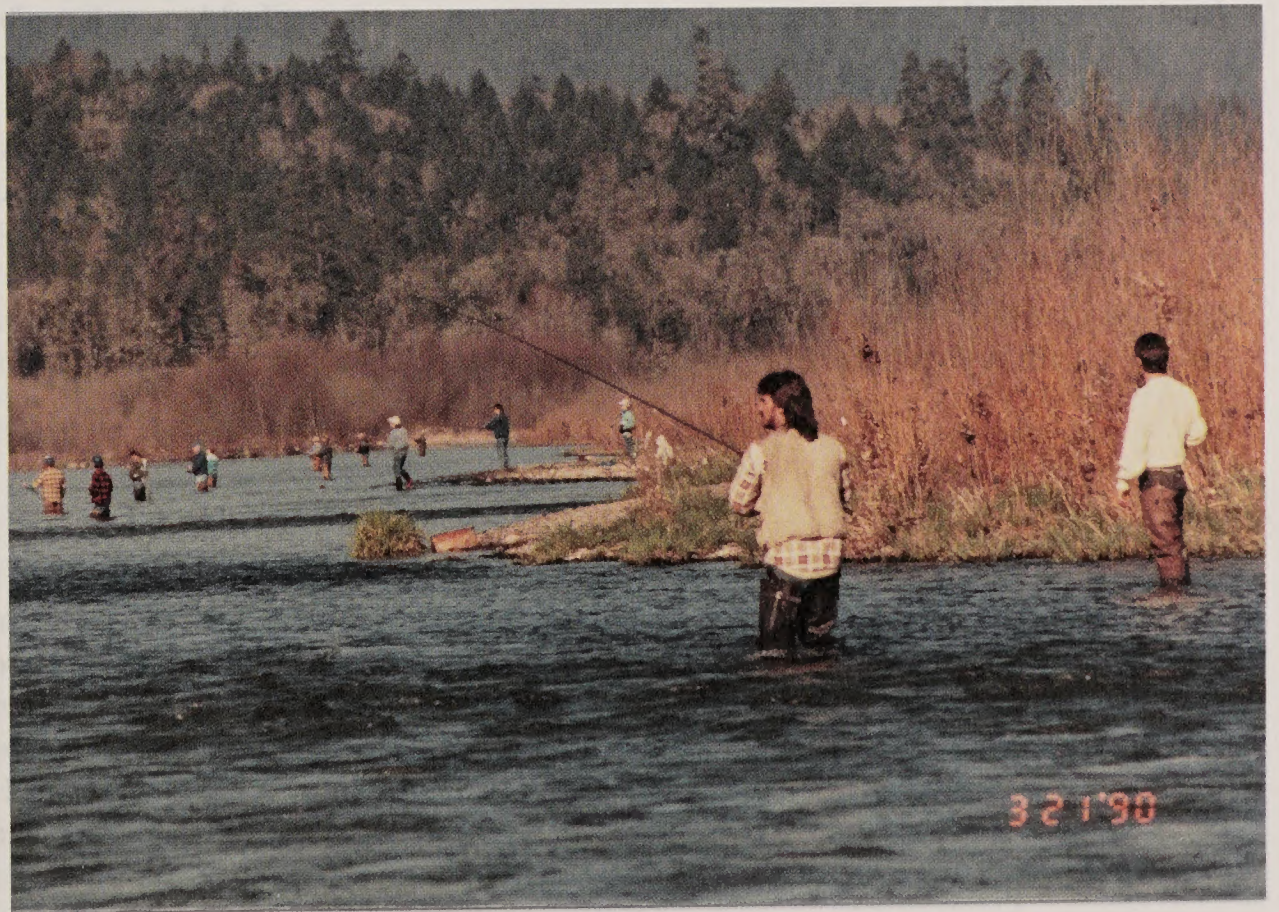
Visitors' satisfaction is the extent to which the visitor's expectations are met. The study of visitors' perceptions and satisfaction is an important part of the study of visitor behavior.

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The majority of visitors rate management of the park as a very important factor in their satisfaction with the park. Approximately 80 percent of all visitors rate the management of the park as a very important factor in their satisfaction with the park.

#### Fisheries

At the time of the study, the majority of visitors rate management of the park as a very important factor in their satisfaction with the park. Approximately 80 percent of all visitors rate the management of the park as a very important factor in their satisfaction with the park.



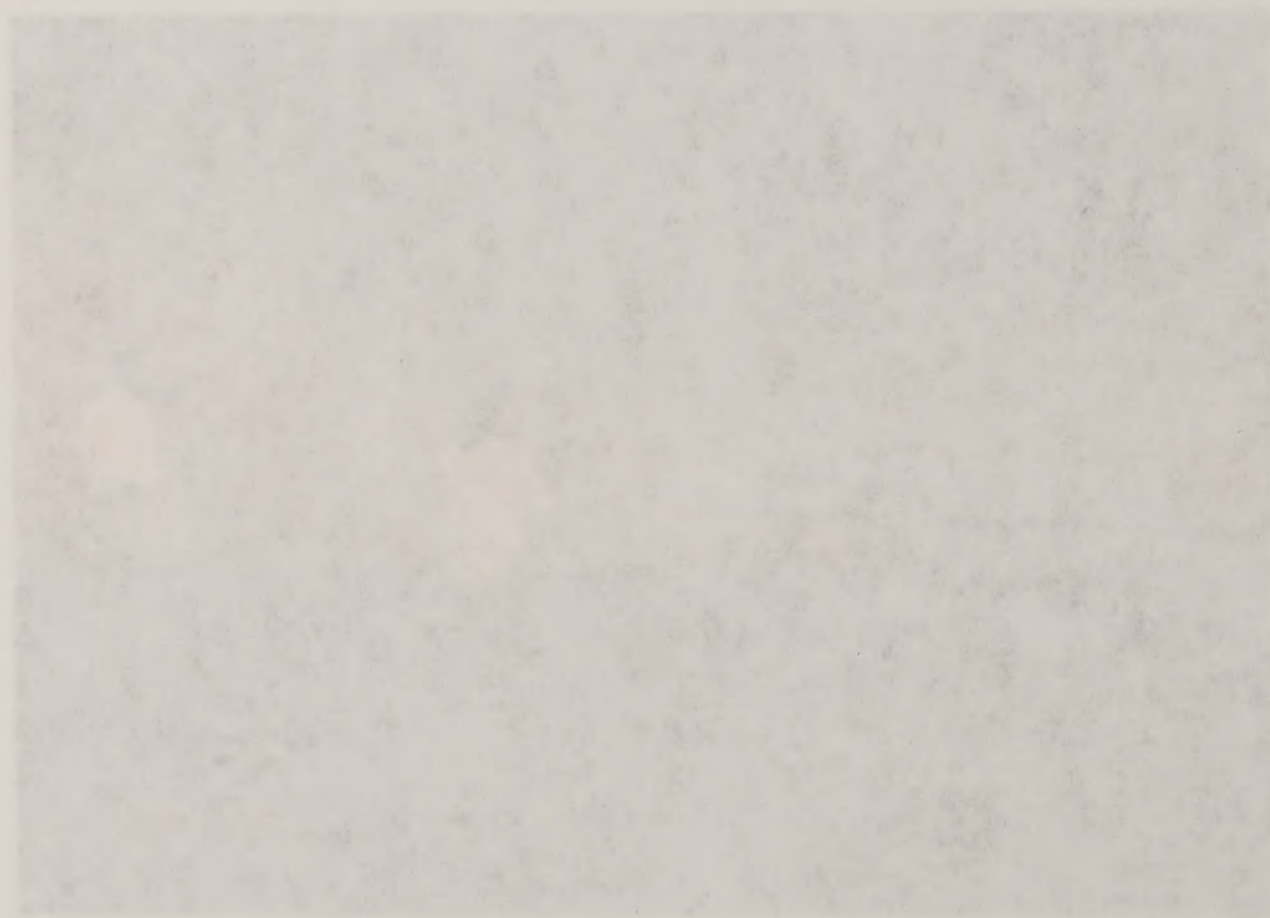
Just downriver from the mouth of the Applegate River, 1990 -  
photo by Becky Brown

#### Recreation

The study of visitors' perceptions and satisfaction is an important part of the study of visitor behavior. The majority of visitors rate management of the park as a very important factor in their satisfaction with the park. Approximately 80 percent of all visitors rate the management of the park as a very important factor in their satisfaction with the park.



# Chapter 4 Environmental Consequences



The photograph shows the river bed of the Upper River, 1950.  
Photo by Jacky Brown



In this chapter, the environmental consequences (effects) of implementing the alternatives (described in Chapter 2) are defined and compared to the existing conditions (described in Chapter 3). This chapter is organized by resource element. Effects are described by alternative within each individual resource as appropriate. Direct, indirect, and cumulative effects are all considered to the extent identifiable in each analysis (40 CFR 1508.8) (see Glossary). The management objectives and standards are applicable to all alternatives (see Appendix C).

# **Effects on Outstandingly Remarkable Values**

## **Natural Scenic Qualities**

### **Visitors' Perceptions and Satisfaction**

Visitor satisfaction is the issue and the indicator. The standard is if the majority of visitors perceived the scenic resource as high quality.

The majority of visitors rate enjoyment of the available scenic resources as very important to the overall enjoyment of their visit. Approximately 90 percent of all visitors rate the existing management and maintenance of the visual resource as positive, thus indicating satisfaction and a perception of the available scenery as high quality (Schindler and Shelby 1993).

### **Effects Common to All Alternatives**

Visitors indicated neutral feelings about any additional developments that might affect the visual scene or scenic quality.

Timber harvest on surrounding lands was not identified as a concern by visitors questioned and thus would indicate that existing cultural modifications are acceptable to them (Schindler and Shelby 1993).

The impact assumption is that all alternatives would have a beneficial effect on scenery due to the fact that no alternatives prescribe any actions that will have any appreciable effect on the visual resource.

## **Fisheries**

All fish are affected to some degree within and nearby the Hellgate Recreation Area boundary. The Eissman Stillwater riffle is of special concern immediately upstream from the Hellgate Recreation Area. Fall chinook salmon have the potential to be adversely affected more than any other fish species, depending on the alternative. The fall chinook stock spawns and rears in the mainstem Rogue River and is vulnerable to boat and angler activity. The fall chinook stock is wild with no hatchery supplementation. Fall chinook have increased over the decades and represent one of the healthiest fisheries in Oregon, if not the world. They are an indicator species in the fisheries analysis of environmental effects.

## **Recreation**

The range and quality of available recreational opportunities is the issue and the indicator. The standard is the maintained existence of these recreational opportunities.



The majority of visitors consider the diversity of available recreational opportunities as one of the main reasons for their visit. Approximately 90 percent of all visitors rate the diversity of available recreational opportunities as excellent. Many comment on the rarity of rivers such as the Rogue, which possess a broad range of available recreational opportunities and realize the value of maintaining such opportunities (Schindler and Shelby 1993)

## **Effects Common to All Alternatives**

The impact assumption is that all alternatives would have a beneficial effect on recreation due to the fact that no alternatives prescribe any actions that will have any effect on available recreational resources.

# **Environmental Effects**

Regardless of the alternative, access to the river corridor through the major portals and trail systems would continue to be available.

Regardless of the alternative, there is the continued potential for naturally occurring wildfire. Occurrence would be random in both time and space.

Regardless of the alternative, fish would continue to inhabit and migrate through the river corridor.

## **Effects of Alternatives on Threatened and Endangered Species and Critical Habitat**

Regardless of the alternative, protection of listed species would take precedence over any management activities.

## **Energy Requirements**

Alternatives encouraging higher levels of visitation and management would cause higher consumption of fossil fuels.

## **Probable Adverse Environmental Effects that Cannot be Avoided**

Implementing any alternative would result in some adverse environmental effects that cannot be avoided. Standards, guidelines, and mitigation measures are intended to keep the extent and duration of these effects within acceptable levels, but adverse effects cannot be completely eliminated.

## **Relationship Between Short-term Uses and Long-Term Productivity**

Short-term use of the land includes the day-to-day and even year-to-year activities that visitors and BLM managers engage in while in the river corridor. It includes activities that physically remove resources from the land, such as hunting, fishing, and berry picking as well as activities that do not, such as rafting, power boating, scenery viewing, hiking, and photography. Short-term actions include management activities, such as vegetation management often performed to permit, encourage, or discourage other activities such as those noted above.

Long-term productivity refers to the land's continuing ability to produce commodities, such as fish, wildlife and plant products; as well as amenities such as scenery and recreation opportunities for future generations. This ability depends on management practices and uses that do not impair soil productivity or water quality to the point they are no longer capable of providing habitat; alter



the natural landscape beyond its ability to recover; or impair geologic features to the extent they lose identity. In designating the Hellgate Recreation Area as a National Wild and Scenic River, Congress specifically recognized its unique natural beauty, historical and archeologic, recreational, and ecological values. Therefore, management decisions must be based on the land's continuing capability to provide these values rather than on urgency, short-term economics, or short-term needs.

## **Irreversible and Irretrievable Commitment of Resources**

Irreversible resource commitments are actions that either deplete a nonrenewable resource or disturb another resource to the point where it cannot be renewed within 100 years. Examples of irreversible commitments are the disturbance of cultural sites, the loss or destruction of a significant geologic feature, or the loss of critical habitat.

Irretrievable resource commitments are opportunities for resource use lost over a period of time because that resource is being used for some other, generally incompatible, purpose. Examples of irretrievable resource commitments are the loss of developed recreational opportunities in areas where wildlife management is the emphasis or, conversely, the loss of wildlife habitat opportunities in highly-developed recreation areas. Irretrievable commitments may not extend forever, because they can be altered through changes in management direction.

Standards and guidelines designed to protect resources that could be irreversibly affected are included in all the action alternatives.

All alternatives contain irretrievable resource commitments. They are unavoidable because it is impossible to manage resources for any purpose without precluding the opportunity to use them for some other purpose.

## **Effects on Air Resources**

Measurements of air pollutant levels within the planning area have never been recorded. Potential effects will be analyzed based on the amount of pollution sources expected to be present in the area compared to known source amounts and pollution levels for Grants Pass, Oregon. Pollutants of concern include: fine particulate (PM10), carbon monoxide, visibility, and light scattering which pertains to visibility and PM10 (see Chapter 3, Air Resources) (ODEQ 1983).

### **Motor Vehicles**

Alternatives that increase visitor use are expected to increase the volume of motor vehicle traffic in the planning area. Higher levels of emissions are possible with higher levels of motor vehicle use. Increases in motorized boating will also add to emissions; however, analysis of pollution emissions from motor boats would be difficult as data on emissions and types of motors in use is not available.

Emissions from motorized vehicles are not currently recognized as having a significant effect on air quality in the planning area. Emissions from motorized vehicles typically would not be expected to exceed national or State of Oregon standards.

### **Effects on Air Quality Common to All Alternatives**

The Oregon Department of Transportation surveys motor vehicle use within the city of Grants Pass. In 1992, the average daily south-bound traffic through the city on 6th Street at the intersection with Savage Street was 17,000 vehicles in a 24-hour period (ODOT 1993). The north bound traffic on 7th Street had an average daily traffic of 16,000. This is a total of 33,000 vehicles per average day.



The peak use period in the planning area is May through September. Maximum average daily traffic has been projected to range between 1,365 to 1,685 vehicles depending on the alternative. These are the maximums that represent weekend use during the summer. The average daily number of vehicles on weekdays throughout the season ranges from 748 to 923. Alternative A has the least motor vehicle traffic; Alternative D has the most; and Alternatives B, C, and E have similar figures.

An analysis of effects to air quality can be made by using the year 2007 projections (Lindsey 1997). Under Alternative D, these use projections can be compared with the city of Grants Pass using the greatest projected use figure of maximum average daily traffic of 1,685 motor vehicles. The projected vehicle use is far below that of Grants Pass and would only constitute 5 percent of the number of motor vehicles that operate in Grants Pass on an average day. The peak use period in the area is during the summer months. Motor vehicle emissions only reach peak effects for PM10 and CO during the winter months. Even at the 33,000 motor vehicle use level, Grants Pass last exceeded an air quality standard in 1991 and never during the summer.

Ventilation produced by diurnal winds is an additional factor that benefits air quality in the summer. The topography of the area typically produces strong up river winds in the afternoon. This makes rowing difficult, but produces good air mixing and dispersion.

Based on the known motor vehicle use and effects to air quality for Grants Pass, the projected levels of motor vehicle use in the planning area are not expected to create any adverse effects to air quality under any of the alternatives. The historic or foreseeable level of motorboat traffic on the Hellgate segment is not expected to have a substantial effect on regional or local air quality.

## **Wildfire and Prescribed Fire**

### **Effects on Air Quality Under All Alternatives**

Effects to air quality from fire are the same for all alternatives. Effects are primarily in the form of visibility impairment from prescribed burning and wildfire. Prescribed burning is expected to have little to no effect, as the majority of burning is conducted outside the peak recreational period and under weather and atmospheric conditions which maximize smoke dispersion. Wildfire smoke during the summer through the fall fire season would have prominent air resource effects (see Effects to Fire).

## **Effects on Fire**

Under all alternatives, effects on fire consist of change in the wildfire risk from human causes. Risk is the causative agent of a fire start. Elements of each alternative that have the potential to change the current wildfire risk level all include change in visitor use of the land areas along the river. This includes change in access and types of use. Actions that increase the dispersion of visitor use over a wider area increase the wildfire risk. Human activities that have the greatest influence on wildfire risk include camping, hiking, and use of off-highway vehicles (OHVs).

### **Alternative A**

Under Alternative A, the current wildfire risk level would decrease. Visitor use would decrease. No new trail systems would be developed. Undeveloped camping sites would be closed. Off-highway vehicle use would be prohibited.

### **Alternative B - No Action**

Under Alternative B, the wildfire risk would remain at the current level. Undeveloped and informal camping and trail use by visitors increases the level of wildfire risk. Fire prevention and



suppression planning cannot adequately address these areas. Fire prevention actions do not occur on these nondesignated areas.

### **Alternative C**

Under Alternative C, the current wildfire risk level would increase above the current level. Two overnight trails would be improved and one new day-use trail would be developed. Five new camping areas would be developed and three would be improved, including two float-in-only access sites. Seven currently undeveloped sites would be developed. OHV use would not occur. Seven new day-use sites would be developed and eight sites would be improved, and four fishing access sites would be developed.

Trail systems would aid in increasing human use and dispersing use over a wider area. The improvement of float-in-only camping sites would increase use. These sites increase wildfire risk because of extremely limited access and increased detection and response time in wildfire situations. The development of new day-use sites mainly coincides with existing informal use areas; however, this would lead to an increase over the current level of use for these areas.

### **Alternative D**

Alternative D produces the highest increase in wildfire risk. It would significantly increase the risk of wildfire occurrence. Visitor access and accessibility to the area would substantially increase above the current level. Nine new trail systems would be developed, four for overnight use. Twelve trail systems would be improved, eight for overnight use. Ten new camping areas and two float-in-only access sites would be developed. Seven existing sites would be improved; three are float-in-only access sites. Fourteen currently undeveloped sites would be developed, including one float-in-only site. Two new trails would be developed. Nine day-use areas would be opened to OHV use. Nine new day-use sites would be developed, 13 sites would be improved, and 4 fishing access sites would be developed.

Alternative D would place the majority of informal, currently nondesignated, use areas under management. This would enhance fire prevention and suppression planning; however, this increase in the number of visitors accessing a wider area of the landscape escalates the number of sources of potential human-caused wildfire.

### **Alternative E - Preferred Alternative**

The Preferred Alternative increases the risk of wildfire occurrence above the current level. This alternative would increase visitor access over a wider area and increase the visitor use level. Visitor access would increase in numbers and in the amount of accessible area through the development of trail systems, float-in-only camping sites, an OHV trail, and day-use sites.

Six trails would be improved, four of these for overnight use. Five new trail systems would be developed, one for overnight use. One new accessible camping area is proposed. Five existing sites would be improved and three of these would be float-in-only access sites. One currently undeveloped site would be developed. One new OHV trail would be developed. OHV use would be allowed in two camping areas (a decrease of two from the current level). Five new day-use sites would be developed, 10 sites would be improved, and 2 fishing access sites would be developed.

Trail systems would aid in increasing human use and dispersing use over a wider area. The improvement of float-in-only camping sites would increase use. These sites increase wildfire risk because of extremely limited access and increased detection and response time in wildfire situations. Off-highway vehicle trails would increase risk of fire start from power equipment in areas of limited access. The development of new day-use sites mainly coincides with existing, informal use areas; however, this would lead to an increase over the current level of use for these areas.



# Effects on Soils

Soil along the riverbanks in the identified erosion sensitive areas would be effected the most as a result of the proposed management actions (see Chapter 3, Soils). These areas are scattered throughout the planning area and are defined as having limited or severe erosion potential. The soils in these erosion sensitive areas are dominantly alluviated sands and silts deposited during past floods and high water events. Environmental effects that would occur in the planning area as a result of implementing any of the alternatives would be in the form of increased soil disturbance and loss of soil due to erosion. Riverbank erosion is variable, but generally is not a problem.

## Erosion Sensitive Areas

### Natural Causes

The major identified causative factors for bank erosion to the erosion sensitive areas tend to be natural and associated with large river discharges. Winter periods of high water are major causes of bank erosion along the planning area. A recent erosion study estimated that 66 percent of all the bank erosion in the planning area is attributable to bank scour that results from floods and strong currents at other times of the year (Klingeman 1993).

The other 34 percent of the bank erosion is attributable to activities that would be managed under the range of alternatives. The erosion analysis indicates that 25 percent of all bank erosion in the planning area is attributable to waves from passing motorized watercraft (Klingeman 1993). The remainder (approximately 9 percent) of the human-caused bank erosion in the area is attributable to other human effects, such as foot traffic on the banks (Klingeman 1993). The amount of effects that would occur would be dependant on the level of specified activities each alternative allows.

### Motorized Boating

Most of the bank erosion is natural. There are very few local areas where motorized watercraft seasonally contribute minimal bank erosion by causing waves that remove loose bank material from the base of banks. In some areas, the boat waves remove stabilizing toe material and cause neblible undercutting of the stable bank.

### Alternative A

Alternative A would cause slightly greater effects than Alternative C, although Alternative A has the same number of total motorized boat trips as Alternative C (maximum of 12 trips per day). Alternative A does not identify erosion sensitive areas for special mitigation and allows commercial use in all reaches of the river during the permit season.

### Alternative B - No Action

Alternative B and the Preferred Alternative have similar effects, as they allow basically the same number of boating trips (maximum of 19 trips per day). The major differences between Alternative B and the Preferred Alternative are that the Preferred Alternative identifies erosion sensitive areas for special mitigation and excludes motorized tour boats and commercial angler traffic from the Dunn Reach during high-use periods in the months of July and August. Therefore, the Preferred Alternative would have a slightly less effect than Alternative B. Both Alternative B and the Preferred Alternative would have greater effects on the soil resource than Alternatives A or C, but less than Alternative D.

### Alternative C

Alternative C would have the least effect on the soil resource as a result of motorized boating. This alternative allows for a relatively low amount of motorized boating activity, prohibits thrill maneuvers, prohibits use of the river by commercial motorized boats in the Dunn Reach, and identifies erosion sensitive areas for special mitigation.



## **Alternative D**

Alternative D would allow the greatest relative effects to the soil resource as a result of motorized boating activities. This proposal allows twice as many total boating trips as Alternative B or the Preferred Alternative (maximum of 26 trips versus 12 trips). Although erosion sensitive areas would be identified for special mitigation, this measure would not adequately offset the relatively large amount of boat traffic that would occur under this alternative.

Overall, it is anticipated that only Alternative D would have enough adverse effects on the riverbanks to potentially cause significant damage to private land. The additional boating traffic under Alternative D would increase the effects that currently occur in some localized areas. Riverbanks in the erosion prone areas would lose soil at nearly twice the rate as at the present time. Mitigation would only slightly offset the effects caused by the additional boat traffic.

It is anticipated that the other alternatives would not have significant effects to the soil resource as a result of the activities permitted in each respective alternative.

## **Alternative E - Preferred Alternative**

The Preferred Alternative and Alternative B have similar effects, as they allow basically the same number of boating trips (maximum of 19 trips per day). The major differences between the Preferred Alternative and Alternative B are that the Preferred Alternative identifies erosion sensitive areas for special mitigation and excludes motorized tour boats and commercial motorized angling boats from the Dunn Reach during high use periods in the months of July and August. Therefore, the Preferred Alternative is slightly less impacting than Alternative B. Both the Preferred Alternative and Alternative B would have greater effects on the soil resource than Alternatives A or C, but less than Alternative D.

## **Recreational Developments**

Developing campsites along the riverbanks would cause some disturbance to the soil and alter the vegetation around the campsites. These effects would be short term, as the soil and vegetation would stabilize in a brief period of time. Disturbance to the riverbanks associated with these campsites would be in the form of foot traffic from boaters accessing the camping facilities. This disturbance, though minor, would occur year after year.

## **Alternative A**

Alternative A would have the least effects to the soil resource since no new campsites would be developed and all undeveloped sites would be closed.

## **Alternative B - No Action**

The effects resulting from Alternative B would not be much greater than those of Alternative A, as Alternative B proposes to develop only one new campsite (Rand) and would improve facilities at only one existing campsite (Argo).

## **Alternative C**

Alternative C and the Preferred Alternative would cause greater effects than Alternatives A or B, but less than Alternative D, as they propose to improve approximately three or four existing campsites and open approximately four camping areas that are presently closed to camping.

## **Alternative D**

Alternative D would cause the greatest effects of any alternative. This alternative would improve 7 existing campsites and open 10 new camping areas that are presently closed to camping. Alternative D proposes to develop 11 new camping areas that are presently undeveloped and acquire more new lands (in order to open new camping areas) than the other alternatives.



## Alternative E - Preferred Alternative

The Preferred Alternative and Alternative C would cause greater effects than Alternatives A or B, but less than Alternative D, as they propose to improve approximately three or four existing campsites and open approximately four camping areas that are presently closed to camping.

## Effects on Water

The water resource in the Hellgate Recreation Area would be used extensively across the range of alternatives. Most managed uses would be recreational, such as by boaters, campers, anglers, and swimmers. Although all users create effects, motorized boats would create the majority of the effects to the water resource from the proposed management uses under all alternatives.

Motorized boats create waves that effect the riverbanks and the river bottom near the shore line. The wave action loosens and detaches soil particles and organic materials in these locations which become suspended in the water causing turbidity. The amount of turbidity that is caused by wave action is dependant on the wave size and the type of bank or bottom it contacts. The larger waves create more turbidity, which can cause materials to be suspended for over three minutes before reaching near pre-wave levels. Turbidity increases dramatically where the riverbanks and river bottom consist of fine sands and silt material. In the erosion sensitive areas, waves of approximately 7 inches in height caused the water near the shore to increase in turbidity approximately 18 times within the first 20 seconds, with turbidity returning to near pre-wave levels after 2 minutes. In contrast, similar size waves created turbidity levels of only two-fold on gravelly/cobbly-type riverbanks and bottoms (Klingeman 1993).

Boat operators can influence the type of waves that are created. Motorized boats moving rapidly and planing on their hulls tend to make moderate-sized waves compared to boats that move less rapidly and are not on plane. Boats that are slowing down tend to create particularly large waves as the hull stops planing, especially if slowing is accomplished suddenly. Boats that move in arcs (sharp turns) tend to throw up large waves on the outside of the arc. Boats close to shore tend to generate larger waves against the near shore than against the far shore.

Generally, boat size influences the size of waves created under normal operating procedures. The motorized tour boats (MTBs) tend to make waves ranging from 7 to 16 inches high, with a typical height of 8 to 10 inches. Smaller jet boats tend to make waves four to six inches high under normal operation, but can make larger waves when stopping or turning.

Waves larger than six inches in height tend to break in water approximately six inches deep and churn up the river bottom. Waves smaller than six inches in height tend to break against the shore and churn up the bank material. Thus, the point of greatest sediment disturbance due to breaking waves tends to shift offshore as waves become larger and vice versa.

Water turbidity quickly increases due to the first breaking waves after a boat passes. Largest turbidity values are reached almost immediately and turbidity begins to decrease within 20 or 30 seconds. It is likely that a mixture of sediment sizes is thrown into suspension and that the coarser material quickly settles while the smaller materials take more time due to smaller settling velocities.

As a result of the relatively small amount of area that could create turbid conditions, the cumulative effects of motorized boating operation would be minimal under any of the alternatives. Locally, turbidity effects in the erosion sensitive areas could be moderate to high depending on the number of boats and type of boat activities allowed under the alternatives.



## **Alternative A**

Alternative A would cause slightly greater effects than Alternative C, although Alternative A has the same number of total motorized boat trips as Alternative C (maximum of 12 trips per day). Alternative A does not identify erosion sensitive areas for special mitigation and allows commercial use of all reaches of the river during the permit season.

## **Alternative B - No Action**

Alternative B and the Preferred Alternative have similar effects as they allow the same number of boating trips (maximum of 19 trips per day). The major difference between Alternative B and the Preferred Alternative B is that the Preferred Alternative identifies erosion sensitive areas for special mitigation and excludes motorized tour boats and commercial angler traffic from the Dunn Reach during high use periods in the months of July and August. Therefore, the Preferred Alternative would result in fewer effects than Alternative B. Both Alternative B and the Preferred Alternative would have greater effects to the soil resource than Alternatives A or C, but less than Alternative D.

## **Alternative C**

Alternative C would have the least effects on the water resource as a result of motorized boating. This alternative provides for a relatively low amount of motorized boating activity, prohibits thrill maneuvers, prohibits use of the river by commercial motorized boats in the Dunn Reach during high use periods in July and August, and identifies erosion sensitive areas for special mitigation.

## **Alternative D**

Alternative D would allow the greatest relative effects on the water as a result of motorized boating activities. This proposal allows twice as many total boating trips as Alternative B or the Preferred Alternative (maximum of 26 versus 12 trips per day). Although erosion sensitive areas would be identified for special mitigation, this measure would not adequately offset the relatively large amount of boat traffic that would occur under this alternative.

The additional boating traffic Alternative D would allow nearly doubles the effects that currently occur in some localized areas. Riverbanks in the erosion prone areas would lose soil at nearly twice the rate as at the present time. Events that cause the water to be turbid for short periods of time would double. Mitigation would only slightly offset the effects caused by the additional boat traffic.

Overall, it is anticipated that only Alternative D would have adverse effects on the riverbanks and river bottom that would cause water quality and fish habitat to also be adversely affected. It is anticipated the other proposed alternatives would not have significant effects as a result of their respective permitted activities.

## **Alternative E - Preferred Alternative**

The Preferred Alternative and Alternative B have similar effects as they allow the same number of boating trips (maximum of 19 trips per day). The major differences between the Preferred Alternative and Alternative B are that the Preferred Alternative identifies erosion sensitive areas for special mitigation and excludes motorized tour boats and commercial angler traffic from the Dunn Reach during high use periods in the months of July and August. Therefore, the Preferred Alternative would result in fewer effects than Alternative B. Both the Preferred Alternative and Alternative B would have greater effects on the soil resource than Alternatives A or C, but less than Alternative D.



# Effects on Riparian Areas, Wetlands, and Flood Plains

The existing riparian areas, wetlands, and flood plains in the planning area would not be significantly effected as a result of implementing any of the management alternatives.

## Effects on Fisheries

Impact indicators include disturbance to redds, eggs, fry, or spawning behavior. The goal is uninhibited fall chinook spawning and rearing. Fall chinook population health is measured by survival, production, and habitat quality and quantity. Impact indicators are used to determine the degree of adverse effects on the fall chinook population.

Current investigations focus on direct effects on adults, eggs, and juvenile salmonids. The focus of the fishery analysis is on the effect of motor boats and angling on fall chinook. The analysis of effects for other salmonids is of less concern because the life histories coincide minimally with river use. Winter steelhead fry spawn in low numbers in the planning area and fry may be present in low numbers near the redds in June. Overall adverse effects to steelhead are probably insignificant because of the distribution of fry away from the redds. See Appendix G for factors and assumptions that affect fisheries. Direct effects occur immediately and indirect effects are similar to latent effects (see Table 4-1).

### Effects Common to All Alternatives

#### Boat and Bank Anglers

Angler numbers are fairly constant throughout the year. The number of boat anglers are highest from August to November and January to March. Bank and boat angling have a moderate potential to produce mortality to chinook eggs in redds. Boat anglers anchor and walk on redds along with bank anglers. Disturbance to spawning behavior is insignificant from all angling. Fish avoid anglers and can move to other areas to spawn unless there is repeated disturbance to the same pair of spawners, which occurs infrequently. Anglers have a moderate potential for adverse effects to spawners and redds throughout the year in all alternatives.

#### Private Motorized Boats

Private motorized boat numbers are high from May to September and lower from October to April. There is a moderate potential for adverse effects from October to April 30. Private motorized boats and drift boats with kickers (outboard motors used to move upstream) may have adverse effects by causing: (1) direct egg mortality by disturbing the gravel in the redds, (2) indirect fry mortality by chasing fry from the redds after emergence and moving gravel in redds, or (3) a disturbance to adult salmon spawning behavior. It is estimated the number of private motorized boats would be low, yet the time of operation can produce egg or fry mortality or adverse disturbance to spawners. Adverse effects to the fishery are greatest from October to April. Private motorized boats have a minimum adverse effect throughout the year in all alternatives.

#### Motorized Tour Boats

There is a possibility of direct adverse effects if fall chinook spawned before October 1, as described above. Indirect adverse effects are not anticipated as a result of MTBs. MTB's are anticipated to have low potential for direct or indirect effects, except in Alternative D.



## **Boat and Visitor Use by Alternative**

This section includes analysis of each alternative by comparing each alternative projected at year 2007 to current management or 1991 levels. There can be either a low, moderate, or high potential for adverse effects (see Table

4-1 for a detailed explanation). Essentially, low potential for adverse effects are highly improbable; moderate potential effects are probable with one egg, fry, or adult mortality; and high potential for effects are highly probable with numerous mortalities. Fall chinook salmon are of primary concern from October 1 to March 31. Winter steelhead spawning, eggs, and emergent fry from February 1 to June 30 are of lesser concern because the probability of occurrence of spawning in the mainstem Rogue River is low.

### **Alternative A**

MTB period of use and projected frequency indicates a low potential for adverse direct effects to all life history stages for fall chinook. Private motorized boats, angling boats, and bank anglers have a moderate potential to cause direct adverse effects when fall chinook and steelhead eggs and fry are near the redds from October 1 to April 30, respectively. Private motorized boat levels would be low yet could have a moderate potential for direct and indirect adverse effects to fall chinook and steelhead eggs in the gravel and to emergent fry near the redd. Presently, private motorized boats move over fall chinook and steelhead redds and according to the results from the Alaska research, this would produce a mortality to eggs. Additionally, fry would be easily displaced from activity over the redd. Boat and bank angling have a moderate potential for adverse effects.

### **Alternative B**

Intensity and duration of adverse effects to fisheries is expected to be the same as Alternative A. Adverse cumulative effects to fisheries would be expected to be the same as Alternative A. Private motorized boat use and angler effects would be the same as Alternative A.

### **Alternative C**

Intensity and duration of adverse effects for MTBs, private motorized boats, and boat angling would be expected to be less than Alternative A. Adverse cumulative effects to fisheries would be expected to be the same as Alternative A. Private motorized boat use and angler effects would be the same as Alternative A.

### **Alternative D**

Intensity and duration of adverse effects would be expected to be much higher than Alternative A because of the extended MTB use period to 10/31. MTB frequency and visitor use significantly increases. The MTB period of use extends into the critical spawning and egg incubation period for fall chinook. There is a high potential for adverse effects from MTB activity during fall chinook spawning in all 13 spawning areas. There would be a 26 percent increase in MTB activity during the critical time of fall chinook spawning, which translates to a very high potential for mortality to the fall chinook run. Adverse cumulative effects to fisheries would be expected to be higher than Alternative A. Private motorized boat use and angler effects would be the same as Alternative A.

### **Alternative E - Preferred Alternative**

Intensity and duration of adverse effects would be expected to be less than Alternative A for MTB use because of the reduced risk to possible spawning fall chinook between 9/15 - 9/30. The alternative provides conditional MTB use between 9/15 - 9/30 for possible fall chinook spawning. This alternative provides the most protection to the four major spawning areas during the MTB use period. Adverse cumulative effects to fisheries would be expected to be the same as Alternative A. Private motorized boat use and angler effects would be the same as Alternative A.



# Effects on Wildlife

## General Effects Associated with Recreation

Recreation has the potential to affect wildlife species inhabiting the Hellgate Recreation Area and its associated riparian and upland habitats. Response to disturbance varies among species of wildlife and even among individuals of the same species. Wildlife can tolerate a certain number of disturbances per unit time, but that tolerance has limits. Tolerance levels vary by species, time of year, habitat, and other factors (Ream 1979; Boyle and Samson 1985). Tolerance levels have not been determined for wildlife species in the Hellgate Recreation Area. Data for historical populations of wildlife and disturbance effects caused by recreation on the Hellgate Recreation Area are incomplete or unavailable (see 40 CFR 1502.22)

Human activities can effect wildlife in four primary ways: exploitation, disturbance, habitat modification, and pollution (Knight and Gutzwiller 1995). Exploitation and disturbance are direct effects. Habitat modification and pollution are indirect effects.

Direct impacts associated with exploitation include immediate death from hunting, trapping, or collection. Direct impacts can also result from the disturbance associated with activities such as photographing wildlife, bird watching, hiking, camping, boating, swimming and shore activities. Immediate responses to disturbance include death or behavioral changes ranging from displacement, nest abandonment, reduced productivity, increased predation, change in food habits, and physiological changes such as elevated heart rates due to flight.

Wildlife are indirectly affected when their habitats are contaminated with discarded human food or foreign objects, such as tangled fishing line or plastic six-pack tops. Recreationists can modify vegetation, soil, water, and even microclimates, which in turn can also have impacts on species dependent on these habitats. Even very light use on a site results in impacts to the soil and vegetation. Sites that are used on a regular basis will have areas where all ground cover vegetation is removed (Shelby et al. 1987)

Rather than addressing long-term responses to disturbance, most studies have focused on immediate impacts. These immediate responses generally apply to individuals rather than populations or communities. Although research showing impacts at the guild or community level is sketchy, a few studies have identified changes in species composition and diversity that can be attributed to recreational activities (Knight and Gutzwiller 1995).

A number of studies have documented the effects of both motorized and nonmotorized boating, particularly on waterfowl, wading birds, and raptors. Total numbers of boats and people can be an inappropriate measure of recreational intensity because the presence of a single boat might be just as disturbing to wildlife as that of many boats (Tuite et al. 1983; Knight and Knight 1984). Likewise, not all types of boats are equally disruptive to wildlife. Motorboats have the greatest disturbance potential because they involve both movement and noise, whereas canoes are less disruptive as they involve only movement.

## Effects on Wildlife Common to All Alternatives

Alternatives A-E do not propose to introduce new forms of recreation or new seasons of operation, but do differ in the projected number of water craft and visitor use days. As part of this EIS, impacts associated with the development or improvement of facilities including day-use areas, camping sites, trails and boat ramps will not be addressed in detail. Prior to their implementation, these activities will require site specific analysis and a detailed summary of potential effects.



The following assumptions are made for analysis purposes and are common to all the alternatives:

Because recreation activities are concentrated on or next to the water, displacement or disturbance of wildlife would be greatest on or immediately adjacent to the Rogue River.

A given amount of recreational use in the riparian zone would have a greater ecological impact than the same amount of use on the surrounding landscape. This results because the riparian zone occupies a relatively small area but receives disproportionately high use from wildlife and provides important benefits to the aquatic system (Shelby et al. 1987)

Some wildlife species have adapted to the presence of humans so that negative effects would be minimal.

Species with specialized food and shelter requirements are more vulnerable to disturbance than species with generalized requirements.

With unlimited visitor access and increasing use, there could be a corresponding increase in displacement or disturbance of some wildlife species. There is a potential that increased human encounters and recreational use may result in the loss of some species or individuals within the corridor if disturbance exceeds tolerance levels. Loss is defined as emigration, avoidance, or mortality.

The majority of river recreation typically occurs before dawn and after dusk. This reduces potential impacts to wildlife species whose activities are primarily associated with these crepuscular hours.

Seasonally, visitor use days within the Hellgate Recreation Area vary dramatically. Under the current management, there are approximately 1,000 visitors a day to the Hellgate Recreation Area for the month of March. By July, a high of 20,000 plus visitors and as many as 450 watercraft per day are estimated. This seasonal increase in visitors corresponds with the reproductive period for a number of species.

## **Threatened or Endangered Species**

### **Bald Eagles**

Recreational activities may disrupt an eagle's environment and behavior temporarily and result in short-term disturbances. In the long-term, however, repeated short-term disturbances may affect individual fitness through effects on survival and reproductive success. Based on this, recreational activities can potentially have both short-term behavioral and long-term ecological impacts on bald eagles (Knight and Gutzwiller 1995). As an example, although bald eagles typically nest in close association with riparian areas, nests are consistently farther from shorelines with human made developments than from areas without development.

Many factors seem to explain flush response rate and flush distance. Eagles flushed more often than expected when boats approached slowly or were loud than when boats approached rapidly or were quiet. Slow moving boats disrupted eagle feeding activity more than fast-moving boats. In one study, eagles were found to flush more often from perches than from nests, and that pedestrians (hikers, anglers, hunters) made up the most disturbing group of 13 categories of human activity. In another study, eagles were largely unaffected by fast-moving, land-based vehicles, but became increasingly agitated as vehicles slowed to a stop.

Lastly, time of day also seems to influence flush response. Eagles flushed more often in response to human activities before 1,000 hours; therefore, human activities during early mornings were potentially more disturbing to foraging eagles (Knight and Gutzwiller 1995).



In one study, it was noted that winter feeding activity of eagles was significantly reduced for periods of up to 30 minutes following human activity. In another study, humans temporarily displaced eagles from foraging areas and restricted the population to a smaller area; birds avoided the same feeding area for long periods following the disturbance.

Bald eagles forage from perch locations generally at the river edges. These perch locations adjacent to the water are very susceptible to disturbance from passing boaters or hikers. Due to their rarity, size, and beauty, eagles draw the attention of recreationists. As a result, boaters, rafters, and hikers stop in front of or approach perched eagles for photo opportunities. This often results in flushing the birds from their perch. The more often this disturbance occurs, the greater the loss of foraging efficiency. This may contribute to lost productivity and reduced survival rates.

In the long-term, recreation can have negative effects on eagle populations through reductions in survival, especially during winter, or result in reduced reproductive success if the effects are cumulative. Bald eagle populations are influenced most by changes in rates of juvenile and adult survival; therefore, any reduction in survival could cause a long-term reduction in the population.

Seasonally, visitor use days within the Hellgate Recreation Area vary dramatically. Eagles establish nesting territories during January and February when recreational use of the river is at one of its lowest levels. Recreational use continues to increase throughout the nesting season and reaches a peak in July and August when the demand for food needed to support eaglets also reaches a peak.

As a result, recreation has the greatest potential for disturbing foraging adult eagles during this critical time. When foraging efficiency is reduced, it can result in mortality to eaglets. Reducing disturbance may allow adults to increase foraging efficiency and increase the number of young raised to fledgling.

Juvenile bald eagles that do fledge are also likely to forage along the Hellgate section. Juvenile eagles have higher energy demands, are less efficient foragers, and must spend considerably more time and energy acquiring food than adults. Consequently, juvenile eagles are more likely to be adversely impacted by human disturbance during this time. This could result in long-term impacts associated with increased energy demands and decreased survival or reproduction.

In the Hellgate recreation area, there are no bald eagle nests known to occur within the 1/4-mile corridor and all recreational activities occur outside of the .5 mile buffers around known eagle nests. However, the Hellgate Recreation Area does include potentially suitable nesting habitat. The suitability of this potential nesting habitat is compromised by the current and projected recreation levels.

The Hellgate Recreation Area is known to provide suitable foraging habitat for bald eagles. Suitable sites for summer and winter foraging include gravel bars with slack water and large trees for foraging. The suitability of this foraging habitat is compromised by the current and projected recreation levels.

Although the alternatives allow for different levels of disturbance from watercraft, it is not possible to say if these differences would be significant enough to result in different levels of impacts. In summary, all alternatives would have a negative effect on bald eagles and their habitat.

### **Northern Spotted Owl**

There are no known northern spotted owl nests within the .25 mile corridor. Unlike bald eagles, northern spotted owls are not strongly tied to river courses for the purpose of nesting or foraging. Their occurrence would be strictly associated with the presence of forests with suitable nesting and foraging habitat attributes.



Where suitable habitat occurs within the .25 mile river corridor, there is the possibility that recreation activities would disturb nesting or foraging birds. Trails or roads that would increase accessibility to roosting sites could have a negative impact on the northern spotted owl. However, potential for disturbance is most often associated with motorized equipment and the loss of suitable habitat features. Based on this, it is unlikely that any of the alternatives would result in negative impacts to the spotted owl or their habitat.

### **Marbled Murrelet**

There are no known marbled murrelet nests within the .25 mile corridor and occupancy is unlikely. Additionally, research and field observations suggest that disturbance created by humans in the vicinity of marbled murrelet nests does not typically create unacceptable levels of disturbance. Based on this, it is unlikely that any of the alternatives would result in negative impacts to the marbled murrelet or their habitat.

## **Special Status Species**

### **Peregrine Falcons**

Although there are no known peregrine falcon nests within the .25 mile corridor, it is probable that they utilize the area for foraging. Similar to bald eagles, peregrine falcons are strongly tied to river courses for the purpose of foraging. However, they typically cover large areas for foraging and do not remain perched for extended periods of time. Based on this, it is unlikely that any of the alternatives would result in negative impacts to the peregrine or their habitat.

### **Osprey**

Osprey nest in the tops of snags (or trees with dead tops) in close proximity to water. The survival of the young depends upon the foraging efficiency of the male osprey who must feed the incubating female and the young after they hatch. Young osprey learn to forage in the waters close to their nest area and increase their hunting skills with time.

For the osprey nests located adjacent to the river within the Hellgate Recreation Area, recreational activities occur during the reproductive period and in close proximity to the nesting activity. Disturbance has the potential to result in reduced foraging efficiency, fewer young being fledged and fewer young surviving their first few weeks after they have fledged.

However, considering that recreational use and osprey nest numbers along the Hellgate Recreation Area have increased correspondingly, it appears that disturbance from humans has not completely compromised habitat values for nesting osprey. In fact, it is likely that many of the osprey utilizing the Rogue River have habituated to certain levels of disturbance.

All alternatives would allow for continued recreation during the nesting season and within close proximity of nesting osprey. Although the alternatives allow for different levels of disturbance from watercraft, it is not possible to say if these differences would be significant enough to result in different levels of impacts.

### **Great Blue Herons**

Breeding populations of great blue herons concentrate in small areas and are particularly vulnerable to disturbance. Because disturbance can result in lost recruitment to the population, nest disruption that occurs during the nesting season of the great blue heron is especially critical. Disturbance can result in changes to behavior, redistribution, population declines, and colony abandonment. When adult herons are flushed from their nests, they can cause egg breakage or push chicks out of the nest. Eggs and young are defenseless when adults are absent (Knight and Gutzwiller 1995).



Great blue herons typically lay from three to five eggs, which hatch asynchronously. As a result, the young vary in both age and size (Ehrlich et al. 1988). If the adults are disturbed during foraging efforts, their efficiency can be greatly reduced and result in fewer prey items being brought to their nestlings. If there is not adequate food for all of the nestlings, great blue heron young will kill their younger and weaker siblings, a practice called siblicide. The greater the number of disturbance encounters, the greater the likelihood of increased mortality of the young.

Great blue heron adults frequently forage along the riverbank and depend on stealth to capture their prey. Like the adults, young great blue herons also feed along the river edges. Young great blue herons expend more energy than adults during their foraging efforts, but are only half as successful. For young birds, disturbance during this learning phase can lead to starvation (Ehrlich 1988).

At the same time, some studies have shown that human activities that pose no direct threat to colonial waterbirds have little to no effect on the birds. Under certain circumstances, colonial waterbirds will tolerate human activities and may even increase in the presence of human activities. Other research has concluded that many species of colonial birds should habituate to repetitive human activity if the birds are able to distinguish whether the human intrusion presents an actual threat to them (Knight and Gutzwiller 1995). Vos et al. (1985) reported that great blue herons habituated to repeated, nonthreatening activities such as fishermen boating past a rookery. Unexpected disturbance, however, put the herons to flight.

For the six known great blue heron rookeries located within the Hellgate Recreation Area, recreational activities occur during the reproductive period and in close proximity to the nesting activity. Monitoring indicates that heron rookeries and nest numbers have declined. It is not possible to confirm how much recreational use has contributed to changed rookery locations or patterns of decreased nest numbers.

All alternatives would allow for continued recreation during the nesting season and within close proximity of great blue heron rookeries. However, it is likely that many of the great blue herons utilizing the Rogue River have habituated to certain levels of disturbance. Although the alternatives allow for different levels of disturbance from watercraft, it is not possible to say if these differences would be significant enough to result in different levels of impacts.

Mature cottonwood stands provide outstanding nesting opportunities for great blue herons. Recreation sites (i.e., picnic areas, campsites, trails) in or adjacent to stands of cottonwoods may reduce the value of those sites as existing or potential rookery sites.

## **Gallinaceous Birds**

The occurrence of mountain quail within the .25 mile corridor is a function of the availability of suitable brush fields for nesting and foraging. It is anticipated that the recreational use that occurs on the river would not have a negative effect on mountain quail or their habitat. However, recreation sites (i.e., picnic areas, campsites, trails) in or adjacent to suitable brush fields would reduce the value of those sites as existing or potential nesting and foraging areas.

## **Reptiles and Amphibians**

Western pond turtle mortality can be attributed to a variety of causes. Mortality associated with recreation includes: roads and vehicle traffic, poaching, collection, habitat modification, trampling of nests, and boat activity.

The western pond turtle is an extremely wary species and usually departs basking sites as soon as disturbance is detected. Observations in Oregon in 1991 indicate that high levels of boat/raft traffic in areas such as the Rogue River may potentially alter thermoregulatory patterns and behavior, and possibly the distribution of certain types of microhabitat, particularly that utilized by hatchlings and juveniles (Holland 1991c). Turtles that become acclimated to the presence of boat



or vehicular traffic may run an increased risk of mortality through shooting. Incidental observations during a study in Washington in 1990 (Holland 1991a) indicate that flight distances of turtles in watercourses in view of low-moderate levels of vehicular traffic often are significantly less than turtles in undisturbed areas.

The suitability of habitat for western pond turtles is compromised by current and projected recreation levels. Since boat activity is projected to increase, there will be continued disturbance to basking turtles. Trails and roads contribute to the potential for greater losses of turtles to vehicle traffic and poaching, or collection by humans. In summary, all alternatives would have the potential for negative impacts to western pond turtles and their habitat.

The suitability of habitat for the northern sagebrush lizard is not likely compromised by current and projected recreation levels. On the recreation section, the greatest potential for northern sagebrush lizard habitat loss is related to the exclusion of fire.

The suitability of habitat for the yellow-legged frog is compromised by current and projected recreation levels. Boat activity, angler activity, road and trail development and construction of boat ramps all have the potential to damage pools or increase siltation in pools utilized for various phases of reproduction. Because tadpoles and froglets typically live in pools connected to the main channel of the river, they are vulnerable to disturbance or collection from people recreating adjacent to the river.

Because it is talus and not riparian corridors that fulfill Del Norte salamander life requisites, the risk of recreation effecting Del Norte salamanders exists only where talus and suitable vegetation occurs. Where suitable Del Norte salamander habitat occurs within the .25 corridor, it may be compromised by current recreation levels. Trails and roads in areas of talus and suitable habitat create the potential for some habitat to be lost or impacted. Because, Del Norte salamanders remain underground during dry weather, they are not likely to be subjected to disturbance or collection during the arid summer months when recreation along the river is at a peak.

## **Mammals**

Bat mortality can be attributed to a variety of causes. Mortality associated with recreation includes: poaching, habitat modification, and disturbance created by recreation in mine or cave sites.

It is unlikely that boating, fishing or recreation activities associated with the river would impact bat populations. However, trails or roads that would increase accessibility to roosting sites would adversely impact bat populations.

## **Other Species**

Although goshawk have been observed within the Hellgate Recreation Area, no nests have been located to confirm these sightings. Goshawk are secretive species and during the nesting season, they are particularly sensitive to human disturbance. Trails or roads that would promote increased visitation or disturbance at nest sites could result in abandonment of nests. Recreation near suitable nesting and foraging habitat could result in negative impacts to goshawk and their habitat.

For woodpeckers and neotropical birds, recreation can result in impacts ranging from nest abandonment, increased predation, displacement, and loss of suitable habitat attributes. Predators such as raccoons and opossums are frequently attracted to areas where human visitation occurs. An increased predator base is particularly problematic for neotropical migrants who are typically small in size and frequently nest in the lower levels of the vegetation layer. Additionally, recreation can impact vegetation through trampling, flower collection and firewood gathering. These impacts are most detrimental to neotropical migrants who utilize the lower levels of the vegetation layer for foraging and nesting. In summary, woodpeckers and neotropical migrants and their habitat could be negatively impacted by recreation activities.



## **Summary of Effects Associated with Recreation**

Under all alternatives, recreation has the potential for compromising full habitat potential for wildlife. However, it is impossible to quantify the potential impacts associated with the various alternatives. Although it can be easily predicted that increased recreation has the potential for resulting in increased disturbance, it is more difficult to predict how this would correspond to potential losses. Since all alternatives allow for recreational disturbance, the key to determining potential impacts is the specific threshold at which disturbance results in wildlife losses. Thresholds for wildlife utilizing the Hellgate Recreation Area have not been identified.

# **Effects on Scenery**

## **Visitors' Perceptions and Satisfaction**

Visitor satisfaction is the issue and the indicator. The standard is if the majority of visitors perceived the scenic resource as high quality.

The majority of visitors rate enjoyment of the available scenic resources as very important to the overall enjoyment of their visit. Approximately 90 percent of all visitors rate the existing management and maintenance of the visual resource as positive, thus indicating satisfaction and a perception of the available scenery as high quality (Schindler and Shelby 1993).

## **Effects Common to All Alternatives**

Visitors indicated neutral feelings about any additional developments that might affect the visual scene or scenery quality.

Timber harvest on surrounding lands was not identified as a concern by visitors questioned which indicates that existing cultural modifications are acceptable (Schindler and Shelby 1993).

The impact assumption is that all alternatives would have a beneficial effect on scenery due to the fact that no alternatives prescribe actions that would have any appreciable effect on the visual resource.

# **Effects on Motorized Boaters**

The environmental consequences that follow address the impact indicator of the recreational opportunities of motorized tour boat passengers (Schindler and Shelby 1993 ).

Table 4-2 summarizes the limits that would be placed on motorized tour boat trips in the Applegate and Dunn reaches. The Dunn Reach trips are part of the Applegate allocation.

## **Alternative A**

Alternative A has a 36 percent decrease in the per day limits of motorized tour boat trips in the Hellgate Reach when compared to the baseline year 1991. This is important to the tour boat passengers' experience, as 75 percent of MTB passengers do not feel that the number of jet boat trips should be reduced.

The effects are considered adversely significant if the projected motorized tour boat trips per day are 30 percent or less than the trips authorized per day in 1991 (represented by Alternative B).



The effects would be considered beneficially significant if the projected motorized tour boat trips per day are increased by more than 30 percent of the trips per day in 1991. If the reduction or increase is less than 30 percent, the change would be considered beneficial.

### **Alternative B. No Action**

A minority of motorized tour boat passengers (25 percent) indicated support for the reduction of motorized tour boat trips. Alternative B does not reduce the number of MTB trips; therefore, there would be a beneficial effect on tour boat passengers.

### **Alternative C**

A minority of commercial tour boat passengers (25 percent) indicated support for the reduction of motorized tour boat trips. Alternative C includes a significant (more than 30 percent) reduction in the number of trips; therefore, there would be an adversely significant effect on tour boat passengers.

### **Alternative D**

A minority of motorized tour boat passengers (9 percent) indicated support for the increase in the number of tour boat trips. Alternative D includes a significant (more than 30 percent) increase in the number of trips; therefore, there would be a beneficially significant effect on tour boat passengers.

### **Alternative E - Preferred Alternative**

A minority of commercial tour boat passengers (25 percent) indicated support for the reduction of tour boat trips. The Preferred Alternative does reduce allocated trips in the Dunn Reach from six to four during July and August. This does not reduce the number of tour boat trips beyond 30 percent of the 1991 limit; therefore, there would be a beneficial effect on tour boat passengers.

## **Effects on Nonmotorized Boat Floaters**

The environmental consequences that follow address five impact indicators of the recreational opportunities of nonmotorized floaters (Schindler and Shelby 1993).

### **Alternative A**

#### **Trip Satisfaction**

Trip satisfaction for nonmotorized floaters during the summer months in the Dunn Reach is the impact indicator. This reach was selected as the analysis area because 90 percent of the floaters use this stretch from Hog Creek to Grave Creek. The standard is if the majority (51 percent or more) of the floaters have an excellent, perfect, very good, or good trip experience and if the projected number of motorized tour boat trips per day in the Dunn Reach do not exceed the maximum authorized in July and August of 1991 (the effects are beneficial if the trip experience is good and the motorized boat trips per day is exceeded, but the effects are beneficially significant if the trip experience is good and the motorized boat trips do not exceed the maximum authorized in July and August of 1991).

Effects on the recreational experience of nonmotorized floaters have not deterred floaters from enjoying their activity. The Hellgate Recreation Area is a very popular recreational area. Increased visitor use levels have had little effect on user satisfaction. Rather than become discouraged, users adjust their view of the higher density situation and remain satisfied. In 1991, almost every floater (99 percent) felt their experience or trip satisfaction was excellent, perfect, very good, or good (Shindler and Shelby 1993).



Trip satisfaction by nonmotorized floaters is expected to continue to be very high under all alternatives. Effects from all alternatives on floaters is that a large majority (over 51 percent) are expected to continue enjoying their activity; therefore, the effects would be beneficial.

Alternative A also has a large decrease (approximately 30 percent) in the allowed motorized tour boat trips per day in the Dunn Reach from the baseline year in July and August of 1991 (see Conflict with Jet Boats and Table 4-3). This is important to the floaters' experience, as 57 percent of them feel that the acceptable number of jet boat encounters is zero if the quality of their recreational experience is to be maintained. Under Alternative A, the effects of this allocation reduction combined with their projected trip satisfaction would have a beneficially significant effect on the floaters' recreational experience (see Table 4-3).

### **Conflict with Jet Boats**

On-river visitor use conflicts between jet boaters and floaters during the summer months in the Dunn Reach is the issue. The projected trips per day and the annual trips of motorized tour boat trips in the Dunn Reach are the impact indicators (motorized tour boat trips equal approximately 95 percent of all jet boat trips in the Hellgate Recreation Area).

### **Trips per Day**

The projected motorized tour boat trips per day in the Dunn Reach measured against the number authorized in July and August of 1991 is the standard (limits of 19 trips per day except for weekends in July and August when it is 6 trips per day).

The effects would be adversely significant if the projected motorized tour boat trips per day in the Dunn Reach exceeds the trips per day in July and August of 1991. Sixty-eight percent of the floaters who feel others interfere with their trip view jet boaters as the group most responsible for the trip interference. Fifty-three percent of the floaters feel there are too many jet boats. Over half of the floaters feel speed, noise, and boat wakes from jet boat activity interfere with their trip. Major safety concerns exist for floaters about the high speeds, the size of boat wakes, the amount of maneuvering room for motorized tour boats, and boats passing too close to rafters and other boats (see Boating Safety for additional information). In addition, all floaters feel that the acceptable number of encounters with jet boats is very low (0.6), with 43 percent of floaters feeling the acceptable number of jet boat encounters is zero. The effects would be beneficially significant if the projected motorized tour boat trips per day are 50 percent or less than the trips authorized per day in July and August of 1991. The effects would be beneficial if the projected motorized tour boat trips per day are more than 50 percent of the trips per day in 1991, but do not exceed 100 percent of the trips allowed per day in 1991.

Alternative A has a 30 percent decrease in the limits for trips per day of motorized tour boats in the Dunn Reach when compared to the baseline year (July and August of 1991) (see Chapter 2 and Table 4-2). This is important to the floaters' experience, as 57 percent of them feel that the acceptable number of jet boat encounters is zero if the quality of their recreational experience is to be maintained. Under Alternative A, this reduction to the limits would have a beneficially significant effect on the floaters' recreational experience (see Table 4-3).

### **Annual Trips**

The projected number of annual trips by motorized tour boats in the Dunn Reach is the indicator. The projected annual number of trips measured against 445 trips, which occurred in 1991, is the standard. The effects would be adversely significant if the projected number of jet boat trips exceeds the standard of 445 trips. The effects would be beneficially significant if the projected number of motorized tour boat trips does not exceed the standard.



Alternative A has a decrease in the maximum number of daily motorized tour boat trips which can be in the Dunn Reach (from 19 to 8); however, the offering and use of white water trips in the Dunn Reach is expected to remain in the range of 25 to 30 percent of the total motorized tour boat service (it was 27 percent in 1991). It is also projected that only rarely will the maximum of eight trips occur in the reach; however, the lower limit of 4 trips for the July 4th holiday and weekends in July and August would be reached.

The 2007 projection for annual white water trips into the Dunn Reach is 496 trips, which is 110 percent of the standard (see Table 4-4). Under Alternative A, this increase in the annual number of trips would have an adversely significant effect on the floaters' recreational experience (see Table 4-3).

### **Carrying Capacity**

On-river visitor use conflict among increasing numbers of all watercraft users during the summer months in the Dunn Reach is the issue. Thirty-eight percent of the floaters feel that others interfere with their trip. Floaters view jet boats as being most responsible for trip interference (68 percent). Over half the floaters feel jet boat activity interferes with their trip. In addition, almost half of the floaters (43 percent) feel their own group interferes with their own float experience. This is reflective of the huge increase in all visitors to the Rogue River by watercraft.

The projected daily number of all watercraft trips in the Dunn Reach is the impact indicator. The indicator for measuring carrying capacity (desired social condition) for nonmotorized floaters is the average number of watercraft used by visitors in the river during the hot summer weekends and holiday in the months of July and August (MRSCTU 1994). The Dunn Reach was selected as the impact area because 90 percent of the floaters use this stretch from Hog Creek to Grave Creek.

The annual number of watercraft trips in 1991 was 18,543. The average number of floaters for the weekend days and holiday in July and August of 1991 was approximately 700 (Austermuehle 1995). These floaters used an average of 350 watercraft for those 18 days in 1991. The average number of parties encountered by floaters was 14 per day (an average of 350 watercraft correlates with an average of 14 parties per day).

The recreation opportunity spectrum encounter objective for a rural river experience is the standard (daily number of encounters not to be exceeded for a rural river opportunity experience) (see Appendix E). The effects would be adversely significant if the average daily number of watercraft trips exceeds the standard during the hot summer weekends. The effects would be beneficially significant if the daily number of watercraft trips is below the standard.

Twenty parties per day is the upper limit encounter standard for a rural river recreation opportunity. The average number of watercraft (350) for the weekend days and holiday in July and August was 70 percent of the carrying capacity for the Hellgate Recreation Area in 1991 (500 watercraft).

Alternative A has a large decrease in the projected average daily watercraft from 350 (in 1991) to 200 watercraft per day in the Dunn Reach during the hot summer weekends and holiday in the months of July and August (see Effects to Visitor Use and Table 4-5). There is even a greater difference between the projected average daily watercraft of 200 watercraft per day and the 500 watercraft carrying capacity. This average daily number is 40 percent of carrying capacity. Under Alternative A, these reductions in all types of watercraft use in relationship to the objective of managing social encounters for a rural river would have a beneficially significant effect on the floaters' recreational experience (see Table 4-3).

### **Limits/Lottery System**

The opposition for limits to numbers of nonmotorized floaters was identified as an issue. A majority (51 percent) of all watercraft users (motorized jet boaters, floaters, and anglers) opposed



limits on rafting/kayaking use (Shindler and Shelby 1993). Seventy-three percent of nonmotorized floaters oppose limits on rafting and kayaking; only 12 percent of floaters support limits.

Establishment by management of limits to nonmotorized floating and a lottery system for private use is the impact indicator. The management requirement for limits and a lottery system measured by the support or opposition from floaters in 1991 is the standard. The effects would be adversely significant if the projected floater support is less than 51 percent. The effects would be beneficially significant if the projected floater opposition for limits and a lottery system is greater than 51 percent.

An impact assumption is that the majority (51 percent) of all floaters 10 years from now are easily expected to feel the same about establishing limits and a lottery system as they did in 1991. Therefore, under all alternatives, establishing limits and a lottery system for private use would have an adverse effect on the floaters' experience.

Alternative A has limits to watercraft use as a management element. Under Alternative A, these limits have adversely significant effects on the floaters' recreational experience (see Table 4-3).

### **Permits and Fees for Private Use**

Nonmotorized floaters' support of permits and fees for private use is the issue. The management requirement for permits and fees is the impact indicator. In 1991, 67 percent of nonmotorized floaters opposed adoption of user fees; only 15 percent of floaters supported fees.

The projected support for permits and fees measured against the support from floaters in 1991 is the standard. The effects are considered adversely significant if the projected floater support is less than 51 percent. The effects would be beneficially significant if the projected floater opposition for permits or fees is greater than 51 percent.

An impact assumption is that the majority (51 percent) of all floaters 10 years from now are easily expected to feel the same about establishing permits and fees. Therefore, under all alternatives, establishing permits and fees for private use would adversely effect the floaters' experience.

Alternative A has permits and fees for private use as a management element. Under Alternative A, these permits and fees would have adversely significant effects on the floaters' recreational experience (see Table 4-3).

## **Alternative B - No Action**

### **Trip Satisfaction**

Trip satisfaction of nonmotorized floaters is expected to continue to be high under Alternative B (see Alternative A). Effects of Alternative B would be beneficial and a large majority of floaters are expected to continue enjoying their activity.

Alternative B has no change in the projected number of motorized tour boat trips per day from the maximum 6 trips authorized in July and August of 1991 (see Table 4-2). Under Alternative B, the effects of no change in daily trips in July and August, combined with their projected trip satisfaction, would have beneficial effects on the floaters' recreational experience (see Table 4-3).

### **Conflict with Jet Boats**

On-river visitor use conflict between jet boaters and floaters during the summer months in the Dunn Reach is the issue (see Alternative A).



Alternative B has no change in the projected number of motorized tour boat trips per day from the maximum 6 trips authorized in July and August of 1991. Under Alternative B, the effects of no change in daily trips in July and August would not effect the floaters' recreational experience (see Table 4-3).

The 2007 projection for annual white water trips into the Dunn Reach is 785 trips, which is 176 percent of the standard (see Table 4-4). Under Alternative B, the effects of this increase in the annual number of trips would have adversely significant effects on the floaters' recreational experience (see Table 4-3).

### **Carrying Capacity**

On-river visitor use conflict among all watercraft users during the summer months in the Dunn Reach is the issue (see Alternative A).

The projected average daily watercraft in the Dunn Reach during the hot summer weekends and holiday in the months of July and August is 496 (see Effects on Visitor Use and Table 4-5). This projected use is 99 percent of the carrying capacity in the Dunn Reach during the weekends and holiday in July and August. Under Alternative B, the level of watercraft use in relation to the objective of managing social encounters for a rural river has beneficially significant effects on the floaters' recreational experience, as long as the carrying capacity is not exceeded (see Table 4-3).

### **Limits/Lottery System**

A minority (12 percent) of nonmotorized floaters support limits on rafting and kayaking (see Alternative A). Alternative B has no limits on watercraft use, and therefore does not propose a lottery system. Therefore, Alternative B would have beneficially significant effects on the floaters' recreational experience (see Table 4-3).

### **Permits and Fees for Private Use**

Nonmotorized floaters' lack of support for permits and fees for private use is the issue (see Alternative A). Under Alternative B, no permits and fees for private use would have beneficially significant effects on the floaters' recreational experience (see Table 4-3).

## **Alternative C**

### **Trip Satisfaction**

Under Alternative C, trip satisfaction by nonmotorized floaters is expected to continue to be high (see Alternative A). Effects from Alternative C would be beneficial and a large majority of floaters (over 51 percent) are expected to continue enjoying their activity.

Alternative C also has a large decrease (approximately 30 percent) in the allowed trips per day of motorized tour boats in the Dunn Reach from the baseline of July and August of 1991 (see Alternative A and Table 4-2). Under Alternative C, these allocation reductions combined with their projected trip satisfaction would have beneficially significant effects on the floaters' recreational experience (see Table 4-3).

### **Conflict with Jet Boats**

On-river visitor use conflict between jet boaters and floaters during the summer months in the Dunn Reach is the issue (see Alternative A).



Alternative C has a large decrease (approximately 30 percent) in the allowed trips per day of motorized tour boats in the Dunn Reach from the baseline year of July and August of 1991 (see Alternative A and Table 4-2). Under Alternative C, this allocation reduction would have a beneficially significant effect on the floaters' recreational experience (see Table 4-3).

The 2007 projection for annual white water trips into the Dunn Reach is 496 trips which is 110 percent of the standard (see Table 4-4). Under Alternative C, the effects of this increase in the annual number of trips would have adversely significant effects on the floaters' recreational experience (see Table 4-3).

### **Carrying Capacity**

On-river visitor use conflict among all watercraft users during the summer months in the Dunn Reach is the issue (see Alternative A). Carrying capacity analysis concerning the BLM management's recreation opportunity spectrum objective identified 500 boat trips per day as the capacity for a rural river encounter experience (see Appendix E).

The projected average daily watercraft in the Dunn Reach during the hot summer weekends and holiday in the months of July and August is 474 (see Effects to Visitor Use and Table 4-5). This projected use is 95 percent of the carrying capacity in the Dunn Reach during the weekends and holiday in July and August. Under Alternative C, this level of use for all types of watercraft in relation to the objective of managing social encounters for a rural river would have a beneficially significant effect on the floaters' recreational experience, as long as a subsequently determined carrying capacity is not exceeded (see Table 4-3).

### **Limits/Lottery System**

A minority (12 percent) of nonmotorized floaters support limits on rafting and kayaking (see Alternative A). Alternative C has no limits for watercraft use and does not propose a lottery system. Under Alternative C, the effects of no limits would be beneficially significant on the floaters' recreational experience (see Table 4-3).

### **Permits and Fees for Private Use**

Nonmotorized floaters' lack of support for permits and fees for private use is the issue (see Alternative A). Under Alternative C, the effects of no permits and fees for private use would have a beneficially significant effect on the floaters' recreational experience (see Table 4-3).

## **Alternative D**

### **Trip Satisfaction**

Under Alternative D, trip satisfaction by nonmotorized floaters is expected to continue to be high (see Alternative A). Effects of Alternative D would be beneficial and a majority of floaters (over 51 percent) are expected to continue enjoying their activity.

Alternative C also has a 25 percent increase in the allowed trips per day of motorized tour boats in the Dunn Reach from the baseline of July and August of 1991 (see Alternative A and Table 4-2). Under Alternative A, this allocation increase, combined with projected trip satisfaction, would have beneficial effects on the floaters' recreational experience (see Table 4-3).

### **Conflict with Jet Boats**

On-river visitor use conflict between jet boaters and floaters during the summer months in the Dunn Reach is the issue (see Alternative A).



Alternative D has a 25 percent increase in the allowed trips per day of motorized tour boats in the Dunn Reach from the baseline of July and August of 1991 (see Alternative A and Table 4-2). Under Alternative D, this allocation increase would have an adversely significant effect on the floaters' recreational experience (see Table 4-3).

The 2007 projection for annual white water trips into the Dunn Reach is 1,074, which is 241 percent of the standard (see Table 4-4). Under Alternative D, this increase in the annual number of trips would have an adversely significant effect on the floaters' recreational experience (see Table 4-3).

### **Carrying Capacity**

On-river visitor use conflict among all watercraft users during the summer months in the Dunn Reach is the issue (see Alternative A). Carrying capacity analysis concerning BLM management's recreation opportunity spectrum objective identified 500 boat trips per day as the capacity for a rural river encounter experience (see Appendix E).

The projected average daily watercraft in the Dunn Reach during the hot summer weekends and holiday in the months of July and August is 533 (see Effects to Visitor Use and Table 4-5). This projected use is 107 percent of the carrying capacity in the Dunn Reach during the weekends and holiday in July and August. Under Alternative D, the level of use for all types of watercraft in relation to the objective of managing social encounters for a rural river would have an adversely significant effect on the floaters' recreational experience (see Table 4-3).

### **Limits/Lottery System**

Alternative D has limits to watercraft use as a management element. Under Alternative D, these limits would have an adversely significant effect on the floaters' recreational experience (see Alternative A and Table 4-3).

### **Permits and Fees for Private Use**

Alternative D has permits and fees for private use as a management element. Under Alternative D, the effects of these permits and fees would have adversely significant effects to the floaters' recreational experience (see Alternative A and Table 4-3).

## **Alternative E - Preferred Alternative**

### **Trip Satisfaction**

Under the Preferred Alternative, trip satisfaction by nonmotorized floaters is expected to continue to be high (see Alternative A). Under Alternative E, the effects would be beneficial and a majority of floaters (over 51 percent) are expected to continue enjoying their activity.

Alternative C also has a large decrease (approximately 30 percent) in the allowed trips per day of motorized tour boats in the Dunn Reach from the baseline of July and August of 1991 (see Alternative A and Table 4-3). Under Alternative E, these allocation reductions combined with their projected trip satisfaction would have beneficially significant effects on the floaters' recreational experience (see Table 4-3).

### **Conflict with Jet Boats**

On-river visitor use conflict between jet boaters and floaters during the summer months in the Dunn Reach is the issue (see Alternative A).



Alternative E has a large decrease (approximately 30 percent) in the allowed trips per day of motorized tour boats in the Dunn Reach from the baseline of July and August of 1991 (see Alternative A and Table 4-3). Under Alternative E, this allocation reduction would have a beneficially significant effect on the floaters' recreational experience (see Table 4-3).

The 2007 projection for annual white water trips into the Dunn Reach is 785, which is 176 percent of the standard (see Table 4-5). Under Alternative E, this increase in the annual number of trips would have an adversely significant effect on the floaters' recreational experience (see Table 4-3).

### **Carrying Capacity**

On-river visitor use conflict among all watercraft users during the summer months in the Dunn Reach is identified as the issue (see Alternative A). Carrying capacity analysis concerning BLM management's recreation opportunity spectrum objective identified 500 boat trips per day as the capacity for a rural river encounter experience (see Appendix E).

The projected average daily watercraft in the Dunn Reach during the hot summer weekends and holiday in the months of July and August is 495 (see Effects to Visitor Use and Table 4-5). This projected use is 99 percent of the carrying capacity in the Dunn Reach during the weekends and holiday in July and August. Under Alternative E, the level of use for all types of watercraft use in relation to the objective of managing social encounters for a rural river would have a beneficially significant effect on the floaters' recreational experience, as long as a subsequently determined carrying capacity is not exceeded (see Table 4-3).

### **Limits/Lottery System**

A minority (12 percent) of nonmotorized floaters support limits on rafting and kayaking (see Alternative A). Alternative E has no limits for watercraft use and therefore, does not propose a lottery system. Under Alternative E, the effects of no limits have a beneficially significant effect on the floaters' recreational experience (see Table 4-3).

### **Permits and Fees for Private Use**

Nonmotorized floaters lack of support for permits and fees for private use is the issue (see Alternative A). Under Alternative E, the effects of no permits and fees for private use have a beneficially significant effect on the floaters' recreational experience (see Table 4-3).

## **Effects on Boat Anglers**

There are five impact indicators that have been identified for the analysis of effects on boat anglers (Schindler and Shelby 1993).

### **Alternative A**

#### **Visit Satisfaction**

The effects on visit satisfaction are considered beneficially significant, as 91 percent of all boat anglers indicated that their experience was excellent/perfect or good or very good regardless of the concerns about other users and types of use. The impact assumption is that the majority of all boat anglers ten years from now are easily expected to feel the same about visit satisfaction.



## **Conflicts with Jet Boats**

The effects on conflicts with jet boats would be considered beneficially significant, as the total number of trips would be under the standard of 445 which occurred in 1991.

## **Conflicts with All Watercraft Users**

The effects on conflicts with all watercraft users would be considered beneficially significant since the daily number of watercraft trips is below the standard established for 1991 and the projections to 2007.

## **Limits/Lottery System**

Since this alternative includes the establishment of such a system and the majority of all users indicate opposition to it (and likely will ten years from now), the effect would be considered adversely significant.

## **Permits and Fees for Private Use**

Since this alternative includes the requirement of user fees and the majority of all users indicate opposition to them (and likely will ten years from now), the effect would be considered adversely significant.

# **Alternative B - No Action**

## **Visit Satisfaction**

The effects on visitor satisfaction would be considered beneficially significant (see Alternative A).

## **Conflicts with Jet Boats**

The effects related to conflicts with jet boats would be considered beneficially significant (see Alternative A).

## **Conflicts with All Watercraft Users**

The effects related to conflicts with all watercraft users would be considered beneficially significant (see Alternative A).

## **Limits/Lottery System**

The effects related to limits/lottery systems would be considered beneficially significant since they are not required.

## **Permits and Fees for Private Use**

The effects related to permits and fees would be considered beneficially significant since they are not required.

# **Alternative C**

## **Visit Satisfaction**

The effects on visitor satisfaction would be considered beneficially significant (see Alternative A).



### **Conflicts with Jet Boats**

The effects related to conflicts with jet boats would be considered beneficially significant (see Alternative A).

### **Conflicts with All Watercraft Users**

The effects related to conflicts with all watercraft users would be considered beneficially significant (see Alternative A).

### **Limits/Lottery System**

The effects related to limits/lottery systems would be considered beneficially significant since they are not required.

### **Permits and Fees**

The effects related to permits and fees would be considered beneficially significant since they are not required.

## **Alternative D**

### **Visit Satisfaction**

The effects on visitor satisfaction would be considered beneficially significant (see Alternative A).

### **Conflicts with Jet Boats**

The effects related to conflicts with jet boats would be considered adversely significant, as the total number of trips exceeds the indicator limit of 445 which occurred in 1991.

### **Conflicts with All Watercraft Users**

The effects related to conflicts with all watercraft users would be considered adversely significant, as the total number of watercrafts would exceed the standards established in 1991.

### **Limits/Lottery System**

The effects related to limits/lottery systems would be considered adversely significant since they are required.

### **Permits and Fees**

The effects related to permits and fees would be considered adversely significant since they are required.

## **Alternative E - Preferred Alternative**

### **Visit Satisfaction**

The effects on visitor satisfaction would be considered beneficially significant (see Alternative A).



### **Conflicts with Jet Boats**

The effects related to conflicts with jet boats would be considered beneficially significant (see Alternative A).

### **Conflicts with All Watercraft Users**

The effects related to conflicts with all watercraft users would be considered beneficially significant (see Alternative A).

### **Limits/Lottery System**

The effects related to limits/lottery systems would be considered beneficially significant since they are not required.

### **Permits and Fees for Private Use**

The effects related to permits and fees would be considered beneficially significant since they are not required.

## **Effects on Bank Anglers**

There are five impact indicators that have been identified for the analysis of effects on bank anglers (Schindler and Shelby 1993).

## **Alternative A**

### **Visit Satisfaction**

The effects on visitor satisfaction would be considered beneficially significant, as 91 percent of all bank anglers indicated that their experience was excellent/perfect or good or very good regardless of the concerns about other users and types of use. The impact assumption is that the majority of all bank anglers ten years from now are easily expected to feel the same about visit satisfaction.

### **Conflicts with Jet Boats**

The effects related to conflicts with jet boats would be considered beneficially significant, as the total number of trips will be under the standard of 445 which occurred in 1991.

### **Conflicts with All Watercraft Users**

The effects on conflict with all watercraft users would be considered beneficially significant since the daily number of watercraft trips is below the standard established for 1991 and the projections to 2007.

### **Limits/Lottery System**

Since this alternative includes the establishment of such a system and the majority of all users indicate opposition to it (and likely will ten years from now), the effect would be considered adversely significant.



## **Permits and Fees for Private Use**

Since this alternative includes the requirement of user fees and the majority of all users indicate opposition to them (and likely will ten years from now), the effect would be considered adversely significant.

## **Alternative B - No Action**

### **Visit Satisfaction**

The effects on visitor satisfaction would be considered beneficially significant (see Alternative A).

### **Conflicts with Jet Boats**

The effects related to conflicts with jet boats would be considered beneficially significant (see Alternative A).

### **Conflicts with All Watercraft Users**

The effects related to conflicts with all watercraft users would be considered beneficially significant (see Alternative A).

### **Limits/Lottery System**

The effects related to limits/lottery systems would be considered beneficially significant since they are not required.

### **Permits and Fees for Private Use**

The effects related to permits and fees would be considered beneficially significant since they are not required.

## **Alternative C**

### **Visit Satisfaction**

The effects on visitor satisfaction would be considered beneficially significant (see Alternative A).

### **Conflicts with Jet Boats**

The effects related to conflicts with jet boats would be considered beneficially significant (see Alternative A).

### **Conflicts with All Watercraft Users**

The effects related to conflicts with all watercraft users would be considered beneficially significant (see Alternative A).

### **Limits/Lottery System**

The effects related to limits/lottery systems would be considered beneficially significant since they are not required.



## **Permits and Fees for Private Use**

The effects related to permits and fees would be considered beneficially significant since they are not required.

## **Alternative D**

### **Visit Satisfaction**

The effects on visitor satisfaction would be considered beneficially significant (see Alternative A).

### **Conflicts with Jet Boats**

The effects related to conflicts with jet boats would be considered adversely significant, as the total number of trips exceeds the indicator limit of 445 which occurred in 1991.

### **Conflicts with All Watercraft Users**

The effects related to conflicts with all watercraft users would be considered adversely significant, as the total number of watercraft will exceed the standards established in 1991.

### **Limits/Lottery System**

The effects related to limits/lottery systems would be considered adversely significant since they are not required.

### **Permits and Fees for Private Use**

The effects related to permits and fees would be considered adversely significant since they are not required.

## **Alternative E - Preferred Alternative**

### **Visit Satisfaction**

The effects on visitor satisfaction would be considered beneficially significant (see Alternative A).

### **Conflicts with Jet Boats**

The effects related to conflicts with jet boats would be considered beneficially significant (see Alternative A).

### **Conflicts with All Watercraft Users**

The effects related to conflicts with all watercraft users would be considered beneficially significant (see Alternative A).

### **Limits/Lottery System**

The effects related to limits/lottery systems would be considered beneficially significant under this alternative since it does not require them.



## Permits and Fees for Private Use

The effects related to permits and fees would be considered beneficially significant under this alternative since it does not require them.

# Effects on Campers

Effects on campers would result from managing campsites, use levels, and public information and education.

## Alternative A

Law enforcement, campfires, and human waste disposal are the same as in the Preferred Alternative. A user fee would be required and would increase campers' costs, while decreasing the number of users, crowding, and campsite competition.

There would be a decrease in camping opportunities from the Preferred Alternative. Camping would not be allowed at sites without toilets so as to discourage improper human waste disposal. There would be a decrease in diversity of recreational activities with no new development of adjacent day-use sites or trails. With less camping opportunities and development, there would be fewer visitors attracted to the area, a decrease in crowding, and an increase in competition for campsites.

Firearms could be discharged in some areas, decreasing camper safety but increasing recreational diversity. Camping group size would be limited to ten people, reducing campsite degradation and crowding, be more restrictive and increase competition for campsites. The camping day limit would be less restrictive at seven days per site. A seven-day limit would be less restrictive, but would increase competition for campsites. Off-highway vehicle (OHV) use would be illegal, decreasing noise, site degradation, access, and the diversity of activity.

Educational subjects and media used to present topics would be the same as in the Preferred Alternative, except there would be no visitor center and fewer educational products (signs, brochures, maps). The news media would be used more to disseminate information about natural resources, history, and prehistory. Campers would be adversely affected by a decrease in educational products and the lack of a visitor center. Campers' experiences could be enhanced by an increased BLM presence and media coverage of the river's cultural and natural resources.

Motorized tour boats would be allowed in the Dunn Reach, but would have fewer trips on the entire river. This would increase crowding and noise in the Dunn Reach, but decrease crowding and noise in the Applegate Reach. Motorized boat racing would be limited to 1985 levels, which would reduce crowding and increase solitude. Partnerships would have a reduced effort for coordination and cooperation.

## Alternative B - No Action

There would be fewer camping opportunities and less development of trails and day-use areas adjacent to campsites. Crowding and diversity would decrease and competition for campsites would increase. Not restricting camping and not limiting group size would result in a continued increase in the number of users, with competition, conflicts, and adverse effects on the environment.

There would be no human waste or group size restrictions and a 14-day camping limit. Improper human waste disposal at sites without toilets increases hazards to human health, adversely affecting the camping experience. Unlimited group size could result in an increase in the number of users, with competition, conflicts, and adverse effects on the environment. A 14-day camping limit would increase campsite competition.



Off-highway vehicle (OHV) use would be allowed at more sites, thereby, increasing noise, crowding, diversity, and campsite competition. Allowing the discharge of firearms would decrease safety and increase diversity.

There would be more motorized tour boat trips and motorized boat racing opportunities. Allowing more motorized tours and racing would decrease solitude and increase crowding. Reduced partnership opportunities would reduce facility improvement opportunities, communication, and coordination.

### **Alternative C**

Group size limit, day limit, and human waste disposal are the same as in the Preferred Alternative. There would be less camping opportunities and less trail and adjacent day-use development. There would be no OHV areas.

Firearms would be allowed in some areas, providing an increase in diversity and a decrease in safety.

Education and law enforcement efforts would be the same as in the Preferred Alternative. If the visitor center was at Merlin or Hog Creek, the effect on campers would be about the same as in the Preferred Alternative.

Motorized tour boat trips and races would be fewer than in the Preferred Alternative, resulting in reduced crowding and increased solitude. Reduced partnership opportunities would reduce facility improvement opportunities, communication, and coordination.

### **Alternative D**

A user fee would be required and would increase campers' costs, while decreasing the number of users, crowding, and campsite competition. Firearm use, human waste disposal requirements, and camping day limits would remain the same as in the Preferred Alternative.

There would be more camping opportunities, which would increase crowding but decrease competition. More trails and day-use sites would be developed adjacent to camp areas, increasing diversity and crowding. Off-highway vehicle opportunities would increase, which would increase crowding, noise, and diversity.

Allowing a maximum camping group size of 30 people would result in a continued increase in the number of users, with competition, conflicts, and adverse effects to the environment. An increase in education, management presence, and law enforcement would enhance the recreational experience. More visitor centers could be available to campers, which would enhance the recreational experience; however, there may or may not be a visitor center at Merlin or Hog Creek, which would make camping information less accessible.

There would be more motorized tour boat trips and motorized boat racing opportunities, which would decrease solitude and increase crowding. More partnerships would increase cooperation and coordination, which could increase facility improvement, law enforcement, and educational efforts.

### **Alternative E - Preferred Alternative**

Allowing camping in suitable sites set aside for camping, providing basic site protection measures and closing and rehabilitating campsites where there is a conflict with significant cultural, riparian, or wildlife values would enhance the camping experience and minimize environmental damage. Improvements proposed for some boat ramps and camping areas would provide enhanced camping opportunities but could also increase interactions among visitors and competition for sites. There would be an increase in camping opportunities.



Providing trails (Robert Dean, Hellgate Placer Mine of Wells and Hellgate) and improving day-use sites (Whitehorse, Griffin, Argo, Rocky Bar, Galice-Hellgate Byway, Robert Dean and Stratton Creek) would enhance the camping visitors' experience with improved conditions and diverse activities. The trail provisions and site improvements could also increase crowding, adversely affecting campers.

Requiring human waste to be packed out from areas where sanitation facilities are not provided would decrease the hazards to human health and enhance the recreational experience. Limiting campfires to Josephine County Parks designated overnight camping areas during the heavy use season precludes the need to require fire pans. Prohibiting the discharge of firearms in the river corridor would be a protection to campers.

Limiting camping group size to 20 people at primitive campsites would reduce crowding and conflicts between groups. The group size limit would keep sites in better condition than if larger groups were allowed. Limiting camping to four days at primitive campsites would distribute use more equitably, while allowing a group to stay in one site over a three-day weekend.

Allowing OHVs at Rocky Bar and Griffin Lane Complex enhances the camping experience by allowing the activity and vehicle access, but it could adversely effect campers due to crowding, competition for campsites, and decreased solitude. Providing campsites for hikers, mountain bikers, and equestrians would broaden the recreational opportunities and distribute use.

No user fee, as compared to having a user fee, would be more cost effective for campers, increasing crowding and competition for campsites.

A visitor center would give campers an opportunity to obtain educational information about the area and where and how to camp, enhancing their experience. Signs, brochures, maps, roving interpreters, and law enforcement officers all provide educational information that is designed to encourage safe, ethical, and courteous camping practices that will protect the environment and all visitors. Signs, roving interpreters, and law enforcement officers can be considered adverse effects on campers when they are perceived as an intrusion. Educational media would inform campers as to how to avoid peak use periods and utilize less crowded sections of the river, resulting in less competition for campsites and enhancing the recreational experience.

Partnerships with governmental agencies, the public, local communities, and special interest groups would enhance camping by increasing opportunities, funding, staffing, coordination, and cooperation.

Limiting motorized tour boats to the Applegate Reach on weekends in July and August and Labor Day weekend would enhance campers' solitude and reduce contact with other visitors. Limiting motorized boat races would enhance campers' solitude and reduce crowding.

## Effects on Trail Users

The analysis of effects on trail users revolves around the type and number of opportunities for trail use across the range of alternatives.

### Alternative A

Under Alternatives A and B, no trails would be designated and no new opportunities for possible trail users would be provided.

Because no designated trails currently exist in the planning area, adverse effects on trail users are not anticipated. Opportunities would either remain the same or increase.



## **Alternative B - No Action**

Under Alternatives A and B, no trails would be designated and no new opportunities for possible trail users would be provided.

Because no designated trails currently exist in the planning area, adverse effects on trail users are not anticipated. Opportunities would either remain the same or increase.

## **Alternative C**

Alternative C would provide three trails for a total of two miles. These trails would only serve hikers. Approximately 1.5 miles of trail would be available for overnight camping. There would be some competition with floaters for campsites, but little conflict is anticipated.

## **Alternative D**

Alternative D would open up 20 trails for a total of 71.5 miles. All user groups would be served somewhere in the trail system. Competition with river users for campsites would increase, especially at Robert Dean Placer Mine.

## **Alternative E - Preferred Alternative**

The Preferred Alternative would provide 26.25 miles of trails on 9 trails. All user groups would be served. Competition would be about the same as in Alternative D.

# **Effects on Other Recreational Users**

Effects on various day users (those who enjoy scenic driving, hunting, wildlife viewing, photography, or recreational mining) would result from managing day-use sites, use levels, and public information and education.

## **Alternative A**

Law enforcement is the same as in the Preferred Alternative. A user fee would be required and would increase visitors costs, while decreasing the number of users, crowding, and site competition.

Camping would not be allowed at sites without toilets so as to discourage improper human waste disposal, leaving more sites open for day use. There would be a decrease in the variety of recreational activities. There would be no new development of trails or day-use sites. With less development, there would be fewer visitors attracted to the area, a decrease in crowding, and an increase in competition for improved day-use facilities.

Firearms could be discharged in some areas, decreasing visitor safety but increasing recreational diversity. Off-highway vehicle (OHV) use would be illegal, decreasing noise, site degradation, access, and diverse activity.

Educational subjects and media used to present topics would be the same as in the Preferred Alternative, except there will be no visitor center and fewer educational products (signs, brochures, maps). The news media would be used more to disseminate information on natural resources and historical and prehistorical topics. Day users would be adversely effected by a decrease in educational products and a lack of a visitor center.

Motorized tour boats would be allowed in the Dunn Reach, but would have fewer trips on the entire river. This would increase crowding and noise in the Dunn Reach, but decrease crowding and noise in the Applegate Reach. Motorized boat racing would be limited to 1985 use levels, which would reduce crowding and increase solitude.



## **Alternative B - No Action**

There would be fewer day-use opportunities and less development of trails and day-use areas adjacent to campsites. Crowding and diversity would decrease, and competition for sites would increase.

There would be no human waste or group size restrictions and a 14-day camping limit. Improper human waste disposal at sites without toilets increases hazards to human health, adversely affecting the day-use experience. Unlimited group size could result in an increase in the number of users, resulting in competition, conflicts, and adverse effects on the environment. A 14-day camping limit would increase site competition.

OHV use would be allowed at more sites, increasing noise, crowding, diversity, and campsite competition. Allowing the discharge of firearms would decrease safety and increase diversity.

There would be more motorized tour boat trips and motorized boat racing opportunities. Allowing more motorized tours and racing would decrease solitude and increase crowding.

## **Alternative C**

Group size limit, day limit, and human waste disposal are the same as in the Preferred Alternative. There would be less day-use opportunities and site development. There would be no OHV areas.

Firearms would be allowed in some areas, providing an increase in recreational diversity and a decrease in safety.

Education and law enforcement efforts would be the same as in the Preferred Alternative. If the visitor center was at Merlin or Hog Creek, the effect on day-use visitors would be about the same as with the Preferred Alternative.

Motorized tour boat trips and races would be fewer than in the Preferred Alternative, resulting in reduced crowding and increased solitude.

## **Alternative D**

A user fee would be required and would increase visitors' costs, while decreasing the number of users, crowding, and site competition. Firearm use, human waste disposal requirements, and camping day limits would remain the same as in the Preferred Alternative.

There would be more day-use opportunities, which would increase crowding but decrease competition. More trails and day-use sites would be developed, increasing diversity and crowding. OHV opportunities would also increase, which would increase crowding, noise, and diversity.

Allowing a maximum camping group size of 30 people would result in a continued increase in the number of users, with competition, conflicts, and adverse effects on the environment. An increase in education, management presence, and law enforcement would enhance the recreational experience. More visitor centers could be available to visitors, which would enhance the recreational experience; however, there may or may not be a visitor center at Merlin or Hog Creek, which would make information less accessible.

There would be more motorized tour boat trips and motorized boat racing opportunities, which would decrease solitude and increase crowding.

## **Alternative E - Preferred Alternative**

Allowing day use in suitable sites set aside for day use, providing basic site protection measures and closing and rehabilitating sites where there is a conflict with significant cultural, riparian, or wildlife values would enhance the day-use experience and minimize environmental damage.



Proposed improvements for some boat ramps and camping areas would provide enhanced day use opportunities, while at the same time could increase interactions with other visitors and competition for sites. There would be an increase in day use opportunities.

Developing and improving trails and day-use sites would enhance the day use experience, which would offer improved conditions and diverse activities; however, it would also increase crowding. Prohibiting the discharge of firearms in the river corridor would be safer for day-use visitors, but would eliminate hunting, thus decreasing diversity.

Allowing OHV use at four sites adds diversity and vehicle access, but could adversely effect day-use visitors, increasing crowding and competition for sites and decreasing solitude. Providing sites for hikers, mountain bikers, and equestrians would broaden the recreational opportunities and distribute use. No user fee would cost the day visitor less, but could increase crowding and increase competition for sites.

A visitor center would give visitors an opportunity to obtain educational information about the area, enhancing their experience. Signs, brochures, maps, roving interpreters, and law enforcement officers all provide educational information to visitors that is designed to encourage safe, ethical, and courteous outdoor use that will protect the environment and all visitors, enhancing their experience. Signs, roving interpreters, and law enforcement officers can be considered adverse effects on visitors when they are perceived as an intrusion. Educational media would inform visitors on how to avoid peak use periods and utilize less crowded sections of the river, resulting in less competition for sites and enhancing the recreational experience.

Limiting motorized tour boats to the Applegate Reach on weekends in July and August and Labor Day weekend would enhance day users' solitude and reduce contact with other visitors. Limiting motorized boat races would enhance visitors' solitude and reduce crowding.

## Effects on Visitor Services

### Effects Common to All Alternatives

The development of a new administrative and/or visitor center does not hinder the attainment of the Aquatic Conservation Strategy Objectives of the Northwest Forest Plan. No new development would occur within the riparian zone of the Grants Pass, Hog Creek, or Rand sites and mitigating measures would minimize adverse effects. Therefore, there are no water quality or fisheries issues associated with this proposed action.

The proposed action would cause indirect impacts to terrestrial wildlife areas immediately adjacent to the project site. In general, the development of a new administrative and/or visitor center would directly impact less than one acre. The majority of construction would occur on sites already disturbed through previous developments or on open space sites which have nominal, if any, value for habitat, recreation, etc.

The proposed action should not effect botanical resources as long as mitigating measures are instituted. Development would cause some disturbance to soils. These impacts would be short term, as the soil and vegetation would stabilize in a brief period of time.

It is not anticipated that the development of a new administrative and/or visitor center would increase traffic above existing levels. See Chapter 4, Effects on Transportation. However, the traffic would be monitored if traffic increases.



## Effects on ORVs

The Rogue has three ORV's, Recreation Opportunities, Scenery and Fisheries. The Recreation ORV would be enhanced by providing improved services to visitors. The Scenery ORV would be unaffected under Alternatives D and E; and the scenery ORV would be adversely effected under Alternatives A-C. The Fisheries ORV would be unaffected under all alternatives. None of the development scenarios affect the biological diversity the Rogue enjoys.

## Effects on Site Locations

See Appendix I for further information.

## Effects on Boating Safety

The effect methodologies used to estimate effects on boating safety from different management alternatives was derived from the boating safety section of the affected environment (WRC 1995).

The environmental consequences that follow address one modeled effect indicator, which is safety risk.

If the probability of another craft not being seen by the tour boat operator in a critical area (sites of concern) equals zero, then the probability of an unavoidable accident is zero (WRC 1995).

Explanation: If an alternative requires the commercial tour boats to utilize spotters on sections of the river where other craft could be hidden from the tour boat operator (safety sites of concern), then the safety risk is zero.

### Alternative A

The use of spotters is not required. The possibility of an unavoidable accident exists. This would be a significantly adverse effect.

### Alternative B - No Action

The use of spotters is recommended to tour boat operators, but is not required. The possibility of an unavoidable accident exists. This would be a significantly adverse effect.

### Alternative C

The use of spotters is required. This would be a beneficially significant effect.

### Alternative D

The use of spotters is required. This would be a beneficially significant effect.

### Alternative E - Preferred Alternative

The use of spotters is required. This would be a beneficially significant effect.

## Effects on Visitor Use

Visitor use is a comprehensive analysis subject, which includes the full breadth of recreational and other categories of use within the planning area. As defined in the Affected Environment, visitor use is dealt with in a context of characterization of uses, how they interrelate and react to each other, and how they are related to the issues identified in the planning process.



Effect analysis for this broad category will be dealt with in detail within the scope of each separate analysis document germane to each defined resource type, social factors relative to management issues and alternatives, and other components of analysis associated with the EIS process.

There were approximately 12,000 visitors by watercraft to the Hellgate Recreation Area in 1968 at the time the Wild and Scenic Rivers Act was passed. The visitor use split among the three major watercraft users was approximately: 2,000 anglers, 1,000 floaters, and 9,000 motorized tour boaters. Visitor use for the three major types of boating use has increased significantly (see Chapter 3, Visitor Use). For example, there are twice as many boat anglers, ten times as many floaters, and seven times as many visitors by MTB (Austermuehle, Walker and Littlefield 1995). Today, there are approximately 110,000 people visiting the river by watercraft.

Tables 4-6 and 4-7 indicate the statistical effects by the next decade on each visitor use activity by activity type and watercraft type. These use projections represent the effects on visitor and watercraft use in pure numbers for evaluative purposes. The 1991 numbers are the base from which the projections were calculated.

## **Effects on Law Enforcement and Emergency Services**

Effects on law enforcement and emergency services are affected by the levels and types of use that are prescribed under each alternative. Alternatives that limit or maintain use at present levels are assumed to be beneficially significant, while alternatives that increase use place additional demands on law enforcement and emergency service resources and are thus adversely significant.

### **Alternatives A, B and C**

The effect assumption for these alternatives is that present levels of law enforcement and emergency services are reasonably adequate and that no further increases in services would be necessary other than those associated with normal regional growth rates. Effects would be considered beneficially significant.

### **Alternative D**

Alternative D establishes a maximum use scenario with all uses increasing, causing a high degree of interaction among individuals and groups. Effects would be considered adversely significant.

### **Alternative E - Preferred Alternative**

The Preferred Alternative prescribes use levels that remain within normal growth rates while minimizing conflicts between user groups. It also establishes carrying capacities for each use that, when reached, trigger more active management mechanisms to control use to within manageable limits. This alternative allows law enforcement and emergency service providers to plan for future changes in the management situation so as to maintain reasonable levels of service to the public. This alternative would be considered to be beneficially significant.

## **Effects on Outfitter Services**

Effects on guided services are affected by how the alternatives affect the guiding industry's ability to provide professional services at a level to supply the public need based upon demand as demonstrated by open market factors.



## **Alternative A**

Alternative A would establish limits on use that would interfere with the open market process which would be an adverse effect.

## **Alternatives B - E**

None of the alternatives, except Alternative A, would have an effect on guided services.

# **Effects on Landowners**

The environmental consequences that follow address the three effect indicators for landowners (York, Rowland and Salley 1994).

## **Alternative A**

### **Landowner Satisfaction**

Limits to the motorized tour boat (MTB) season of use, number of trips per day, as well as limits to other watercraft users, would reduce the overall motorized use of the river. However, there would be no MTB schedule, time-of-day restrictions, or any requirement that the MTBs operate in groups, making encounter duration and timing unpredictable. The overall effect on peaceful enjoyment is unknown. Limits to all other users would decrease encounters.

### **Sight of River Users**

There would be fewer river users because of imposed use limits; however, timing of encounters would be uncontrolled.

### **Sounds of River Users**

MTB thrill/power maneuvers are not limited nor are any sound management techniques used; however, the total number of trips is reduced. Overall, there would be a reduction in sound from river users.

The two hydroplane races would continue which would cause sound disturbance for some landowners. No other events would be allowed.

## **Alternative B - No Action**

### **Landowner Satisfaction**

Limits to MTBs (number of trips, time of day, and seasonal restrictions) requirements that they travel in groups with a set schedule would enhance property enjoyment. There are no limits on floaters that would not limit future number of encounters with this type of user.

### **Sight of River Users**

MTB use is limited; sight of other users would continue to increase.

### **Sound of River Users**

Sound management techniques are not used. Two hydroplane races would cause sound disturbance to some landowners.



## **Alternative C**

### **Landowner Satisfaction**

A reduction in the number of MTB trips per day plus requirements for trip schedules, group operation, and a time of day restriction (10:30 a.m. to 7 p.m.) would increase enjoyment of property.

### **Sight of River Users**

Fewer MTBs would reduce sight intrusions; however, two large MTBs would be allowed, causing an increased visual effect. Limits to float craft in the future (if carrying capacity is reached) would limit those encounters as well.

### **Sound of River Users**

Sound management areas would be designated. Thrill and power maneuvers would be eliminated for MTBs. All special boating events would be eliminated.

## **Alternative D**

### **Landowner Satisfaction**

An increase in the number of MTB trips allowed, the time of day allowed, and the size of boats would decrease the enjoyment of property.

The lack of limits on float boaters could cause problems in the future.

### **Sight of River Users**

Larger MTBs and more trips would increase visual intrusion, as would no limits on float craft.

### **Sound of River Users**

Sound management areas would not be designated. Thrill/power maneuver areas would be limited. Education of users would be employed to reduce sound. Special boating events would be encouraged. An increase in the number of MTB trips would increase sound intrusions.

## **Alternative E - Preferred Alternative**

### **Landowner Satisfaction**

Limits to MTBs (number of trips, time of day and seasonal restrictions) requirements that they travel in groups with a set schedule would enhance property enjoyment. Other users would be limited as carrying capacity is reached.

### **Sight of River Users**

Visual intrusion of float craft would be limited to carrying capacity.

### **Sound of River Users**

Sound management areas would be designated. Thrill/power maneuver areas identified and time of day limits for these maneuvers should decrease sound intrusions to landowners.



# Effects on Sound

The effect methodologies used to estimate effects to sound from different management alternatives was derived from the sound section of the affected environment (USDI 1994).

The effect indicator is the number of motorized tour boat trips. The indicator for sound is the number of tour boat trips allowed per day. The major complaint of landowners concerning unwanted sound is generated by the motorized tour boats.

## **Alternative A**

The maximum number of round trips per day is 12. This is a reduction from the current 19 trips per day and would be considered beneficially significant.

## **Alternative B - No Action**

The maximum round trips per day is 19. This maintains the current 19 trips per day and would have no effect.

## **Alternative C**

The maximum number of round trips per day is 12. This is a reduction from the current 19 trips per day and would be considered a beneficially significant effect.

## **Alternative D**

The maximum number of round trips per day is 26. This is an increase from the current 19 trips per day and would be considered a significantly adverse effect.

## **Alternative E - Preferred Alternative**

The maximum number of round trips per day is 19. This maintains the current 19 trips per day and would have no effect.

# Effects on Transportation

## **Visitor Use**

When the Rogue River was designated a Wild and Scenic River, the public's awareness of the Rogue River's recreational benefits expanded to a national level. Under each alternative, visitor use projections for 2007 would increase along the river. Based on these increases, average daily traffic flow is considered in the evaluation of the existing transportation system.

## **Transportation**

The capacity of a transportation system reflects its ability to accommodate a number of people or vehicles. The level of service a transportation system delivers is a measure of the capacity and quality of flow. Capacity and quality of flow are two methods to measure the need for improvements on an existing transportation system.

## **Improvements**

Based on the visitor use projections for 2007, an average daily traffic flow was computed for each alternative. A field review of the existing transportation system added information to the reference condition of the traffic flows. This data was analyzed using the third edition of the Highway Capacity Manual, which reflects two decades of comprehensive research conducted by a variety of



research agencies, primarily the National Cooperative Highway Research Program and the Federal Highway Administration. Its development was guided by the Transportation Research Board Committee on Highway Capacity and Quality of Service. This analysis was used to develop a projection for improvements that might be needed for the existing transportation system. It is based on capacity and quality of flow.

## **Projections for 2007**

The flow capacity (highest peak hourly traffic rate) for the Merlin-Galice Road was the indicator used to identify transportation effects (see Table 4-8).

As significant changes occur in the number of vehicles per hour or the condition of the roadway, planners and engineers consider changes to improve capacity and the level of service. Through construction, reconstruction, or improvements, adjustments can be made in lane widths, shoulder widths, the number of lanes, horizontal and vertical alignment, and other geometric factors. These are the tools that are used to address capacity or service deficiencies.

The difficulty in observing capacity operations on two-lane roads in North America presents problems in suggesting a standard value for use in computational procedures. A maximum total of 2,800 vehicles, peak capacity per hour, in both directions under ideal conditions was adopted as the capacity standard for the Merlin-Galice Road (Highway Capacity Manual). The standard was based on the combination of field observations and simulations. This standard was then compared to the increases in the capacity and quality of flow (highest peak hourly traffic rate) for the Merlin-Galice Road.

## **Summary of Effects for All Alternatives**

The highest peak hourly rate of vehicles is under Alternative D. The highest peak hourly rate of 152 is only 5.43 percent of the maximum total vehicles for peak capacity per hour of 2,800. This figure is insignificant to the existing transportation system; therefore, none of the alternatives would have any significant effect on traffic flows.

# **Effects on Socioeconomics**

The economic effects were estimated using an input-output model for Jackson and Josephine counties. Several studies regarding visitor use and expenditure patterns were consulted to estimate the type and amount of expenditures made by visitors to the Rogue River. Activity-based expenditures, such as permit/license fees, equipment rental, and guide fees were assigned to the activity. Expenditures for food, gifts, and lodging were assigned to a "type of lodging" category. Day use was divided into activity and type of lodging categories to appropriately continue the division of expenditures into the two categories used. For this reason day use appears once in Table 4-9 and again in Table 4-10.

## **Alternative A**

Alternative A limits boating use on the Hellgate section of the Rogue River by placing limits on the numbers of craft permitted per day. These limits restrict motorized tour boating and private floating opportunities below 1997 use levels. Current guided float use is below the craft limit set by this alternative, allowing for growth in this particular category of use. For analysis purposes, it is assumed that existing private float users will use guide services if unable to gain access privately. This would result in growth in guided float use significantly above all other alternatives where float use (guided and private) is unconstrained.

Underlying patterns of recreation growth, particularly in nonboating day use, result in overall visitation and economic activity greater than 1997 use levels. Total place of work income is



estimated to be \$33.44 million, an increase of \$2.12 million. Jobs are estimated to be 1,831, an increase of 118 jobs from current levels.

The amount of place of work income and employment generated by motorized tour boating decreases to two thirds of the 1997 levels, from 313 to 209 jobs and \$5.72 million to \$3.81 million. Offsetting this decrease to some extent is the large increase in guided floating that is projected. Place of work income and employment generated by guided floating more than double from 1997 levels, from 30 jobs to 62 jobs and \$546,000 to \$1,128,000. Typically, visitors who take guided float trips generate more economic activity than private floaters. Because this alternative assumes conversion of private floaters to guided floaters, greater economic activity would be generated than would otherwise be expected given total overall use.

### **Alternative B**

Alternative B represents the continuation of existing management direction. Under this alternative, place of work income and jobs generated would be expected to rise. Growing population and aging of baby-boomers are the underlying causes of increasing visitation. Total place of work income is estimated to be \$37.86 million, an increase of \$6.54 million. Jobs are estimated to be 2,072, an increase of 359 jobs from 1997 levels.

### **Alternative C**

Alternative C places the greatest constraint on motorized tour boating of all the alternatives. Other recreational activities are estimated to increase at rates similar to those in Alternative B. Under Alternative C, jobs and place of work income generated by Rogue River recreation is estimated to be 1,890 jobs and \$34.50 million. This is an increase of 177 jobs and \$3.18 million above the 1997 levels.

### **Alternative D**

Of all the alternatives, Alternative D accommodates the largest rate of growth in visitation and results in the greatest increases in jobs and place of work income. This increased visitation would be accommodated by new visitor facilities, including trails, day-use sites, boat launches, and campgrounds. Jobs are estimated to increase by 655 to 2,368. Place of work income would increase by \$11.95 million to \$42.27 million.

### **Alternative E - Preferred Alternative**

The Preferred Alternative limits motorized tour boating to 1995 levels. This is below current levels due to growth in use since 1995 and thus would require a small reduction. The resulting effect on hotel and motel lodging seen in Alternatives A and C is not readily detectable given the increases in other types of recreational uses.

Overall, both jobs and place of work income generated by Rogue River visitation would increase under this alternative. Jobs increase from 372 to 2,085 and place of work income from \$6.77 to \$38.09 million.

## **Effects on Environmental Justice**

The majority of impacts to the human environment are distributed based on the type of user and/or place of residence. The BLM could not discern from available data any use patterns or residential patterns related specifically to low-income or minority populations. The BLM has concluded that there are no disproportionate or adverse effects to low-income or minority populations.



# Effects on Management Costs

The effect methodologies used to estimate effects on management costs of different management alternatives was derived from the management cost section of the affected environment of the Hellgate RAMP/DEIS.

The environmental consequences that follow address four important effect indicators for changes in management costs (see Table 4-11).

## Alternative A

### Change in Services Provided by the Government

No new services would be provided. Reduction of requirements and regulations for motorized tour boats would reduce monitoring of this activity and result in a reduction of monitoring costs.

### Change in Management Action

The institution of a permit and fee system to implement the limited access provisions of this alternative would create additional costs. Limiting special motorized boating events to two events would decrease management costs.

### Change in Capital Improvements

The development of new camping areas, trails, and boat ramps would increase expenditures for capital improvements.

### Change in Maintenance Requirements

Capital improvements would increase maintenance costs.

## Alternative B - No Action

### Change in Services Provided by the Government

There would be no change in services.

### Change in Management Action

Limiting special motorized boating events to two would decrease management costs for the evaluation of proposals and administration of permits.

### Change in Capital Improvements

The development of the original planned capital improvements for camping areas, watchable wildlife sites, new fishing access sites, and improvements to existing boat ramps would increase capital improvement costs.

### Change in Maintenance Requirements

Increased attention to maintenance standards and capital improvements would increase maintenance costs.



## **Alternative C**

### **Change in Services Provided by the Government**

Fall chinook spawning activities would be monitored.

### **Change in Management Action**

Changes include the addition of sound management areas, angling enhancement zones, fall chinook monitoring and spawning sensitive areas, safety sites of concern, erosion sensitive areas, boat wake areas, and new and additional motorized tour boat regulations and restrictions.

This is the first alternative that contains major changes to how the BLM does business on this section of the river. It contains many new concepts and initiatives directed toward improving conditions on the river for all parties involved. The implementation, public education, monitoring, enforcement and evaluation of these programs would increase management costs.

The institution of a permit system would increase management costs. If in the future it becomes necessary to limit use through the institution of a lottery or other allocation system with a fee collection system, this would also increase management costs.

The elimination of special motorized boating events would reduce management costs.

### **Change in Capital Improvements**

Alternative C includes major increases in capital improvements.

Adding primitive and developed camping sites and developing and improving trails, day-use areas, watchable wildlife sites, and existing boat ramps, and adding new fishing access sites would increase capital improvements.

### **Change in Maintenance Requirements**

Increased attention to maintenance standards and capital improvements would increase maintenance costs.

## **Alternative D**

### **Change in Services Provided by the Government**

A sound management area is not designated, but BLM would provide education to users to minimize sound intrusion.

### **Change in Management Action**

Changes include the addition of sound management areas, angling enhancement zones, fall chinook spawning sensitive areas, safety sites of concern, erosion sensitive areas, thrill power maneuver areas, boat wake areas, and new and additional motorized tour boat regulations and restrictions.

Alternative D contains many new concepts and initiatives directed toward improving conditions on the river for all parties involved. The implementation, public education, monitoring, enforcement and evaluation of these programs would increase management costs.

The institution of a permit system would increase management costs. The collection of fees from all users would increase management costs.



Additional special boating events would increase management costs for permit evaluation, processing and monitoring.

### **Change in Capital Improvements**

Alternative D includes major increases in capital improvements.

Adding primitive and developed camping sites and developing and improving trails, day-use areas, watchable wildlife sites, and existing boat ramps, and new boat ramps and adding fishing access sites would increase capital improvements.

### **Change in Maintenance Requirements**

Increased attention to maintenance standards and capital improvements would increase maintenance costs.

## **Alternative E - Preferred Alternative**

### **Change in Services Provided by the Government**

Fall chinook spawning activities would be monitored.

### **Change in Management Action**

Changes include the addition of sound management areas, angling enhancement zones, fall chinook monitoring and spawning sensitive areas, safety sites of concern, erosion sensitive areas, thrill power maneuver areas, and new and additional motorized tour boat regulations and restrictions.

The Preferred Alternative contains many new concepts and initiatives directed toward improving conditions on the river for all parties involved. The implementation, public education, monitoring, enforcement and evaluation of these programs would increase management costs.

The institution of a permit and fee system, if necessary in the future, would increase management costs at that time.

Additional special boating events would increase management costs for permit evaluation, processing and monitoring.

### **Change in Capital Improvements**

The Preferred Alternative includes major increases in capital improvements.

Adding primitive and developed camping sites and developing and improving trails, day-use areas, watchable wildlife sites, and existing boat ramps, and adding new fishing access sites would increase capital improvements.

### **Change in Maintenance Requirements**

Increased attention to maintenance standards and capital improvements would increase maintenance costs.



# Effects on Gross Revenues

Gross revenues are defined as those monies derived through commercial outfitter fee submission as part of the BLM's Special Recreation Permit system. Establishment and use of such fees is at present mandated through fiscal legislative processes and is not within the purview of the BLM's planning processes. There is the possibility, however, that recent legislative developments may initiate a funding pathway wherein commercial outfitter fee revenues will return to the resource from whence they were earned.

These revenues are primarily generated by three commercial user groups: motorized tour boats, guided fishing, and guided floating. Each of these three distinct commercial uses generates the same percentage of revenue (i.e., 3 percent of gross reported income collected by the commercial operators from their customers). Motorized tour boat fees are the dominant contributor to the total fees collected from commercial activities. The customers of each of these commercial groups, however, have their own specific spending patterns within the local area from which they acquired their commercial services. Table 4-12 shows visitor use totals projected to 2007 for the three major types of commercial recreational activities.

For the purposes of this effect assessment, alternatives that sustain or increase fees would be determined to be beneficial. If fees decrease, then it would be determined to be detrimental. The effect assumption is that the present dollar amount of fees collected would work to beneficially maintain the quality of the recreation resource.

## **Alternative A**

Alternative A limits the dominant fee contributor (motorized tour boats) to a use level well below present levels and 78 percent of total commercial use. This reduction would be an adverse effect on gross revenues.

## **Alternative B - No Action**

Alternative B has no effect on the gross revenues and thus would be considered beneficially significant. This alternative is beneficial to revenues because of underlying growth. No change in the methodology of collection will allow for increased revenue as use increase. Motorized tour boats remain in the 90th percentile of all commercial use.

## **Alternative C**

Angler and floater enhancement is the hallmark of this alternative; therefore, the motorized tour boats are limited as in Alternative A. Alternative C would have an adverse effect on gross revenues.

## **Alternative D**

Maximization of watercraft and visitor use under Alternative D would increase gross revenues; therefore, the effects would be beneficially significant.

## **Alternative E - Preferred Alternative**

The Preferred Alternative is very similar to Alternative B and would be considered beneficially significant.



# Chapter 4

## Tables







**Table 4-1. Summary of Effects of Alternatives on Fall Chinook Adults, Juveniles and Eggs for High Boating Season and Minimal Boating Season in the Hellgate Recreation Area**

	<u>Season of Use</u>	<u>Alternative A</u>	<u>Alternative B</u>	<u>Alternative C</u>	<u>Alternative D</u>	<u>Alternative E</u>
Key Indicators used to evaluate effects to species Redds with eggs and fry Presence = October - May	1	low	low	low	high	low*
	2	low	moderate	moderate	high	moderate (*high - during conditional period Sept. 15-30)
	<u>Season of Use</u>	<u>Alternative A</u>	<u>Alternative B</u>	<u>Alternative C</u>	<u>Alternative D</u>	<u>Alternative E</u>
Uninhibited apparent or actual spawning behavior Presence = October - January	1	low	low	low	high	low
	2	moderate	moderate	moderate	high	moderate

1 =Highly active boating season; overall high use angling season; May 1 - September 30.

2 =Minimal boating activity season; overall high use angling season; October 1 - April 30.

Risk Assessment : potential effects anticipated to fall chinook steelhead.

Low Potential for Effects = no indirect adverse effects; no direct adverse significant effects. Generally adverse effects are highly improbable.  
Expected significant adverse direct effects include disturbance to spawning behavior or disruption to spawning, egg incubation, or fry rearing.

Moderate Potential for Effects = no indirect adverse effects; direct adverse significant effects. Generally direct adverse effects are highly probable.

Expected significant limited or minor mortality to one adult, egg, or fry; or habitual mortality; spawning behavior is inhibited.

High Potential for Effects = no indirect adverse effects; direct adverse significant effects. Generally direct adverse effects are highly probable.  
Expected significant adverse direct effects include disturbance to spawning behavior or disruption to spawning, egg incubation, or fry rearing.

Expected significant limited or minor mortality to numerous adults, eggs or fry; or habitual mortality; spawning behavior is inhibited.



**Table 4-2. Allocation/Limits of Motorized Tour Boats in the Hellgate Recreation Area**

Impact Indicators	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
<b>Allocation/Limits</b> (trips per day)					
<b>Applegate Reach</b>	Maximum round trips per day is 12.	Maximum round trips per day is 19.	Maximum round trips per day is 12.	Maximum round trips per day is 26.	Maximum round trips per day is 19.
<b>Dunn Reach</b>	Maximum round trips per day is 8, except on July 4th and weekends in July and August when it is 4 trips.	Maximum round trips per day is 19, except on weekends in July and August when it is 6 trips.	Maximum round trips per day is 8, except on July 4th and weekends in July and August when it is 4 trips.	Maximum round trips per day is 16, except on July 4th and weekends in July and August when it is 8 trips.	Maximum round trips per day is 8, except on July 4th and weekends in July and August when it is 4 trips before noon.



**Table 4-3. Summary of Impacts to the Nonmotorized Floater**

Impact Indicators	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
<b>Trip Satisfaction</b>	Beneficially significant	Beneficial	Beneficially significant	Beneficial	Beneficially significant
<b>Conflict with Jet Boats: Daily Use</b>	Beneficial	Neutral/no change	Beneficially significant	Adverse	Beneficially significant
<b>Conflict with Jet Boats: Annual Use</b>	Adversely significant	Adversely significant	Adversely significant	Adversely significant	Adversely significant
<b>Carrying Capacity</b>	Beneficially significant	Beneficially significant <sup>1</sup>	Beneficially significant <sup>1</sup>	Adversely significant	Beneficially significant <sup>1</sup>
<b>Limits/Lottery System</b>	Adversely significant	Beneficially significant	Beneficially significant <sup>1</sup>	Adversely significant	Beneficially significant <sup>1</sup>
<b>Permits and Fees</b>	Adversely significant	Beneficially significant	Beneficially significant <sup>2</sup>	Adversely significant	Beneficially significant <sup>2</sup>

<sup>1</sup>. The effect in the long term could turn into an adversely significant impact as use is projected to be very close to the carrying capacity (see Table 4-5) and a lottery system would probably be required.

<sup>2</sup>. The effect in the long term could turn into an adversely significant impact as fees are required if carrying capacity is reached (see footnote 1).



**Table 4-4. Projected Annual Number of Motorized Tour Boat Trips in the Dunn Reach By 2007**

	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
<b>Annual Number<sup>1</sup></b>	496	785	496	1,074	785
<b>1991 Standard<sup>2</sup></b>	445	445	445	445	445
<b>Percent of 1991 Standard<sup>3</sup></b>	110	176	110	241	176

1. The indicator for measuring impacts for nonmotorized floaters is the projected annual number of motorized tour boat trips in 2007.

2. The standard is the actual number of motorized tour boat trips which occurred in the Dunn Reach during 1991.

3. The percentage relationship between the annual number and the standard.

**Table 4-5. Projected Average Daily Number of Watercraft in the Dunn Reach By 2007**

	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
<b>Daily Number<sup>1</sup></b>	200	496	474	533	495
<b>Standard<sup>2</sup></b>	500	500	500	500	500
<b>Percent of Capacity<sup>3</sup></b>	40	99	95	107	99
<b>Watercraft Numbers<sup>4</sup></b>	10,596	26,275	25,126	28,257	26,251

1. The projected average daily number of watercraft in 2007 that would be used by visitors in the Dunn Reach during the hot summer weekends and holiday months of July and August. The average daily number is also the indicator for measuring carrying capacity (i.e., desired social condition) for nonmotorized floaters.

2. The recreational opportunity spectrum encounter objective for a rural river experience is the standard (i.e., daily number of encounters not to be exceeded for a rural river opportunity experience). See Appendix E.

3. The percentage relationship between the average daily number and the standard (see footnotes 1 and 2).

4. The projected annual number of all watercraft in the Hellgate Recreation Area.



**Table 4-6. Visitor Use Projections by Activity Type for 2007**

Activity	1991	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
MTB	72,860	57,946	89,310	53,758	116,487	85,122
Pvt. Floats *	28,404	4,004	31,544	31,443	31,544	31,544
Guided Floats	5,965	140	8,296	8,296	8,296	8,296
Pvt. Bank Angler	7,348	8,049	8,049	8,049	8,049	8,049
Pvt. Boat Angler	6,782	1,204	5,022	5,022	5,022	5,022
Guided Angler**	2,690	2,535	2,028	1,980	3,850	1,980
R.R. Day Use	399,026	621,960	643,996	682,586	703,122	672,310
R.R. Camping	68,904	84,949	87,064	88,954	92,540	87,064
R.R. Lodging	15,539	25,942	25,942	25,942	25,942	25,942
Miscellaneous	10,153	16,000	16,000	16,000	16,000	16,000
Totals	617,671	822,729	917,251	922,030	1,010,852	941,329

\* Includes numbers from private floating plus private motorized boating.

\*\* Includes numbers from commercial motorized and nonmotorized angling boats.

**Table 4-7. Water Craft Use Projections by Activity Type for 2007**

Activity	1991	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
MTB	1,661	1,836	2,907	1,836	3,978	2,907
Pvt. Floats *	10,560	182	14,336	14,282	14,336	14,336
Guided Floats	4,342	100	5,926	5,926	5,926	5,926
Pvt. Boat Angling	1,337	547	2,092	2,092	2,092	2,092
Guided Angling **	643	1,192	1,014	990	1,925	990
Totals	18,543	3,857	26,275	25,126	28,257	26,251

\* Includes numbers from private floating plus private motorized boating. Because use is so small (less than half a percent), the private motorized boating was added to private floats for the totals.

\*\*Includes numbers from commercial motorized and nonmotorized angling boats.



**Table 4-8. Traffic Flow on Merlin-Galice Road**

TOTALS	1991	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
<b>VISITORS</b>	700,698	819,130	917,251	922,030	1,010,852	941,329
<b>Maximum</b>						
<b>Average Daily Traffic<sup>1</sup></b>	1,168	1,365	1,528	1,537	1,685	1,569
<b>Average Daily Traffic (ADTs)<sup>2</sup></b>	640	748	838	842	923	860
<b>Highest Peak Hourly Rate (HPHRs)<sup>3</sup></b>	105	123	138	138	152	141

<sup>1</sup> Maximum ADTs are for high-use periods, May through September, Saturday and Sunday.

<sup>2</sup> ADTs are an average computed over one calendar year based on total visitors.

<sup>3</sup> HPHRs are based on 90 percent of the maximum ADT traveling within a 10-hour period.



**Table 4-9. Place of Work Income Generated by Activity and Lodging Class**

	Baseline	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Motor Tour Boating	5,719,805	3,810,529	5,873,026	3,535,126	7,660,185	5,597,623
Private Floats	127,309	97,416	152,358	152,358	152,358	152,358
Guided Floats	545,752	1,127,834	655,218	655,218	655,218	655,218
Pvt. Bank Angler	27,285	38,877	38,877	38,877	38,877	38,877
Pvt. Boat Angler	18,451	5,815	24,256	24,256	24,256	24,256
Guided Angler	148,539	233,879	187,103	182,675	355,201	182,675
Misc. Activity	104,125	136,000	136,000	136,000	136,000	136,000
R.R. Day Only	3,576,752	4,540,308	4,701,171	4,982,878	5,132,791	4,907,863
R.R. Campgrounds	562,564	722,067	740,044	756,109	786,590	740,044
R.R. Lodging	382,804	503,534	503,534	503,534	503,534	503,534
Camping Total	3,016,313	3,500,683	3,811,157	3,713,722	4,169,313	3,817,611
Hotel/Motel	7,516,058	7,086,144	8,690,887	7,106,220	10,098,150	8,550,766
Friends/Relatives	1,538,679	1,712,004	1,917,893	1,876,847	2,139,539	1,962,578
Day Use	<u>8,034,967</u>	<u>9,920,154</u>	<u>10,428,592</u>	<u>10,839,305</u>	<u>11,415,962</u>	<u>10,820,288</u>
Grand Total	31,319,402	33,435,245	37,860,115	34,503,124	43,267,973	38,089,690



**Table 4-10. Jobs Generated by Activity and Lodging Class**

	Baseline	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Motor Tour Boating	313	209	322	194	419	307
Private Floats	7	5	8	8	8	8
Guided Floats	30	62	36	36	36	36
Pvt. Bank Angler	2	2	2	2	2	2
Pvt. Boat Angler	1	0	1	1	1	1
Guided Angler	8	13	10	10	19	10
Misc. Activity	6	8	8	8	8	8
R.R. Day Only	199	253	262	278	286	274
R.R. Campgrounds	32	41	42	42	44	42
R.R. Lodging	21	28	28	28	28	28
Camping Total	160	186	202	197	221	202
Hotel/Motel	407	384	470	385	547	463
Friends/Relatives	82	91	102	100	114	104
Day Use	<u>446</u>	<u>551</u>	<u>579</u>	<u>602</u>	<u>634</u>	<u>601</u>
Grand Total	1,714	1,833	2,072	1,891	2,367	2,086



**Table 4-11. Estimated Management Costs (Dollars)**

Item	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
One time development cost	880,000	140,000	2,105,000	3,335,000	3,335,000
<b>Yearly Costs Excluding One Time Development Costs (Dollars)</b>					
New development staffing costs	140,000	0	210,000	210,000	210,000
New development maintenance costs	66,400	50,600	191,700	365,800	333,500
Basic maintenance costs	59,500	52,000	58,500	58,500	60,500
General operating costs	122,300	75,800	152,700	163,500	165,300
Law enforcement costs	50,000	0	50,000	50,000	50,000
Yearly cost total	438,200	178,400	662,900	847,800	819,300
<b>Yearly Costs Including One Time Development Costs (Dollars)</b>					
Yearly costs	438,200	178,400	662,900	847,800	819,300
Development costs	880,000	140,000	2,105,000	3,335,000	3,335,000
Yearly cost total	1,318,200	318,400	2,767,900	4,182,800	4,154,300



**Table 4-12. Major Commercial Recreation Activities by Projected 2007 Visitor Use**

Visitor Use	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
<b>MTBs</b>	57,946	89,310	53,758	116,487	85,122
<b>Floats</b>	14,280	8,296	8,296	8,296	8,296
<b>Boat Ang.</b>	2,535	2,028	1,980	3,850	1,980
<b>Totals</b>	<b>74,671</b>	<b>99,634</b>	<b>64,034</b>	<b>128,633</b>	<b>95,398</b>
<b>MTB %</b>	<b>78%</b>	<b>90%</b>	<b>84%</b>	<b>91%</b>	<b>89%</b>



# Chapter 5

## Consultation and Coordination

Fall Chinook Salmon Fishing, 1990 - photo by Beck



Fall Chinook Salmon Fishing, 1990 - photo by Becky Brown







The Hellgate Recreation Area Management Plan (RAMP)/Draft Environmental Impact Statement (EIS) was prepared by an interdisciplinary team of specialists from the BLM Medford District Office, the BLM Coos Bay Office, and the BLM Oregon State Office. Writing of the Draft began in early 1995; however, comprehensive scoping and research studies began in 1991. The planning process involved many steps with public participation, as well as consultation and coordination with many agencies and organizations.

The following is a list of people involved in the preparation of this Draft RAMP/EIS, a list of agencies and organizations contacted during its preparation and to whom a copy of the Draft RAMP/EIS has been sent, and a summary of public involvement to date.

## List of Preparers

<u>Name</u>	<u>Responsibilities/Positions</u>	<u>Qualifications</u>
<b>BLM Management</b>		
Ron Wenker	Management Guidance/ Medford District Manager	B.S., Range Management, California State University. BLM, 26 years.
<b>RAMP Team</b>		
Louise Austermuehle	Permit Administration, Visitor Use, Visitor Use Projections/Forestry Technician	A.A., Recreation, Lassen College. USFS, 9 years; BLM, 15 years.
Bill Bentley	Contract Administration for Studies Program/Contracting Officer	U.S. Fish and Wildlife, 10 years; Bureau of Reclamation, 3 years; BLM, 17 years.
Bob Bessey	Fisheries Resources/Fisheries Biologist	M.S., Fisheries, University of Washington. Private Industry, 4 years; BLM, 24 years.
John Bethea	Human Waste Management, Recreation Facilities/Forestry Technician	22 years in recreation and wastewater management. Wastewater Management Certification, State of Oregon. BLM, 26 years.
Rebecca Brown	Recreation Sites, Public Outreach, Document Production Coordination/Forestry Technician	B.S., Wildlife Management, Humboldt State University. USFS, 1 year; BLM, 16 years.
Mathew Craddock	Lands and Minerals/Realty Specialist	B.S., Forest Recreation, Iowa State University. BLM, 19 years.
Cori Cooper	Planning Team Leader/Outdoor Recreation Planner	A.S., Administrative Office Management; Business Education, Southern Oregon State College. BLM, 7 years.
Leslie Frewing-Runyon	Socioeconomics/Regional Economist	B.A., Economics, Willamette University. BLM, 11 years.
Ted Hass	Soils Resources, Riparian-Wetlands, Water Resources/Soil Scientist-Hydrologist	B.S., Soil Science, California Polytechnic University. Soil Conservation Service, 1.5 years; BLM, 21 years.
Dale Johnson	Fisheries Resources/Fisheries Biologist	B.S., Fisheries Science, Oregon State University. Environmental Consulting, 3 years; EPA, 1 year; Bonneville Power Administration, 10 years; BLM, 12 years.
Barbara Kinney	Document Production/Office Automation Assistant	A.A., Computer Programming, Florida Technical College. Private industry, 4 years; DOD, 12 years; BLM, 2.5 years.
Jeanne Klein	Recreation Opportunity Spectrum, Content Analysis/Outdoor Recreation Planner	B.S., Biology, Augustana College; M.S., Forestry, Southern Illinois University. BLM, 10 years.
Ron Laber	Hazardous Materials/Hazardous Materials Coordinator	Studied Forest Road Design, Montana State University; Hazardous Materials Management, Wayne State University; Computer Science, Southern Oregon State College. Private industry, 15 years; BLM, 26 years.
Jim Leffmann	Overall Program Guidance, Visual Resources, Recreational Anglers (impacts, attitudes, and carrying capacity)/Rogue River Program Manager	B.S., Law Enforcement, Southern Oregon State College; M.A., Outdoor Recreation Planning, Oregon State University. City of Portland, 3 years; USFS, 1 year; BLM, 24 years.



Doug Lindsey	Transportation Systems/Lead Civil Engineering Technician	B.S., Civil Engineering Technology, Oregon Institute of Technology. Federal Highway Administration, 2 years; BLM, 20 years.
Pete Littlefield	Public Involvement Analysis; Visitor Use; Data Base Consultation, Design, and Analysis/Computer Assistant	BLM, 14 years.
Linda Mazzu	Botany, Sensitive Plants/Botanist	B.S., Humboldt State University; M.S., Penn State University. NPS, 13 years; BLM, 5 years.
Jim McConnell	Technical Coordinator/District Environmental Coordinator	B.S., Forest Management, Colorado State University. USFS, 4 years; BLM, 20 years.
John McGlothlin	Geographic Information Systems (GIS), Automated Resources Data (ARD) (mapping and calculations), Proof Reader/GIS Coordinator	B.S., Forestry, University of Montana. BLM, 23 years.
Jason Miniken	Recreation Maintenance, Human Waste Management, Visitor Use, Sign Interpretation/Park Ranger	B.S., Recreation Resource Management, Oregon State University. BLM, 6 years.
Tom Murphy	Air Quality, Wildfire/Fuels Management Specialist	B.S., Natural Resource Management, Rutgers University. USFS, 1 year; BLM, 20 years.
Bob Murray	Timber Management/Forester	B.S., Forest Land Management, Northern Arizona University. BLM, 20 years.
Cheryl Nelson	Document Production/Office Automation Clerk	B.A., Technical Writing, Southern Oregon University. BLM, 4 years.
Karen Perault	Public Information (News Releases)/District Public Affairs Officer	M.N. Recreation Administration, Chico State University B.A. Environmental Studies, Sonoma State University. BLM, 10 years, Prineville and Medford Districts, Oregon. California State Government Service, 5 years.
John Prendergast	Silviculture/Supervisory Forester	B.S., Forest Management, West Virginia University. Georgia-Pacific Corporation, 1 year; USFS, 3 years; BLM, 16 years.
Eric Schoblom	Program Coordination, Land Use, Scenic Easements, MTB Visitors, MTB Permits, Budget Projects, Development Scenarios/ Associate Manager Rogue River Program	B.S., Forestry, Oregon State University. USFS, 3 years; BLM, 23 years.
Robyn Siebold	Public Involvement Analysis, Trails, Editing, Consultation and Coordination, Graphic Design/ Park Ranger	B.S., Resource Recreation Management, Oregon State University. Oregon State Parks, 11 years; BLM, 10 years.
Jerry Walker	Recreation Facilities/Maintenance Worker	Sumter Trade School, Sumter, South Carolina. Private 5 years; BLM, 30 years.
<b>Past Team Members</b>		
Bruce Albert	Law Enforcement, Permit Compliance/District Law Enforcement Ranger	B.S., Wildlife management, Humboldt State University. Law enforcement, 26 years.
Kurt Austermann	Public Information (News Releases)/District Public Affairs Officer	B.S., Journalism, Boston University. Radio/Television News Director, Newspaper Correspondent, 10 years; USFS, 11 years; BLM, 15 years.
Harold Belisle	Management Guidance/ Grants Pass Area Manager	B.S., Forestry and Recreation Management, Colorado State University; M.S., Planning and Park Administration, Texas Tech University. BLM, 20 years.
Gerard Capps	Geology/Geologist	B.S., Geology, University of California. Exploration geologist, 4 years; BLM, 22 years.
David A. Jones	Management Guidance/Medford District Manager	B.S., Forestry and Range Management, Colorado State University. BLM, 37 years.
Robert Korfhage	Management Guidance/Grants Pass Field Manager	B.S., Range Management; M.S., Range/Wildlife Habitat Management, Washington State University. BLM, 29 years.



Gretchen Lloyd	Management Guidance/ Grants Pass Area Manager	Environmental Science, University of Virginia. USFS, 3 years; BLM, 22 years.
Cliff Oakley	Wildlife/Wildlife Biologist	B.S., Biology, Southern Oregon University; M.S., Biology, Southern Oregon University. BLM, 22 years.
Joan Seevers	Botany, Sensitive Plants/Botanist	B.S., General Studies-Science/ Math, Southern Oregon State College. BLM, 23 years.
Kate Winthrop	Cultural Resources/District Archaeologist	M.A., Ancient Studies, University of Minnesota; Ph.D., Anthropology, University of Oregon. Contract archaeologist, 10 years; BLM, 8 years.
Mike Walker	Plan and EIS Coordination, Public Involvement Analysis, Recreational Rafters, Consultation and Coordination, Sound/Outdoor Recreation Planner	B.S., Natural Resources; M.S., Resource Geography, Oregon State University. County government, 3 years; BLM, 30 years.

## List of Agencies and Organizations Contacted

The RAMP/EIS team or supporting individuals in the Oregon State Office contacted or received input from the following organizations during development of the Draft RAMP/EIS or the preceding steps.

### Federal Agencies

- USDA, Forest Service
- USDI, Bureau of Mines
- US Corps of Engineers
- US Coast Guard
- USDI, Bureau of Land Management
- USDI, National Park Service
- USDI, Bureau of Reclamation
- USDI, Bureau of Indian Affairs

### State of Oregon Agencies

- Department of Fish and Wildlife
- Department of Water Resources
- Economic Development Department
- Department of Land Conservation and Development
- Division of State Lands
- Parks and Recreation Department
- State Marine Board
- Department of Environmental Quality
- State Historic Preservation Office
- Oregon State Department of Forestry



## Local Government and other Governmental Bodies

City of Grants Pass  
Josephine County Commissioners  
Josephine County, District Attorney  
Josephine County Forestry  
Josephine County Planning Office  
Josephine County Parks  
Josephine County Sheriff  
Oregon State Senate  
Rogue Valley Council of Governments

## Organizations

America Outdoors  
American Rivers  
Association of O&C Counties  
Chamber of Medford/Jackson County  
Grants Pass and Josephine County Chamber of Commerce  
Grants Pass River Racers  
Grants Pass Visitor & Convention Bureau  
Headwaters  
Izaak Walton League  
Middle Rogue Steelheaders, Trout Unlimited  
National Organization for River Sports  
Nature Conservancy  
Neighbors of Hussey Lane  
Northwest Rafting Association, Grants Pass Chapter  
Oregon Guides and Packers Association  
Oregon Natural Resources Council  
Rogue River Guides Association  
Siskiyou Chapter National Audubon Society  
Sequoia Paddling Club  
Sierra Club  
Southern Oregon Powerboat Association  
Southern Oregon Regional Economic Development  
Southern Oregon Timber Industry Association

## Businesses

Armadillo Mining Shop  
Auto Tech  
Carney's Fishing Adventures  
Echo  
Enlightened Expeditions  
Galice Resort  
Hellgate Excursions, Inc.  
Oars  
Pringle's Guide Service  
Rainman Excursions  
Rogue Excursions  
Rogue River Raft Trips  
River Trips Unlimited  
Valley Steel and Fabrication



# Public Involvement

## Scoping Processes

Extensive public involvement has occurred since the Hellgate planning process began in 1991. Many members of the public participated in these scoping efforts.

Scoping had three phases: (1) an early effort from May 1991 through December 1992 when the approach to revise the plan was through an environmental assessment (EA), (2) a formal environmental impact statement (EIS) scoping effort from October 1993 through January 1994, and (3) an additional informal scoping effort from May through September 1994 when the issues and alternatives were refined and shared with the public.

### **Environmental Assessment Scoping: May 28, 1991 through December 1992**

The BLM initiated the process to revise the Hellgate RAMP through an EA process May 28, 1991 with the publication and distribution of a comprehensive preplan analysis document (USDI, BLM, MDO, GPRA 1991). The preplan analysis document identified: the boundaries and the objectives for the Hellgate Recreation Area derived from previous planning efforts; documented the scope, complexity, and requirements for the planning effort, including possible inventory requirements; initiated internal and external coordination, including the identification of possible stakeholders and partners; identified a BLM interdisciplinary team; and a schedule to revise the river plan. The preplan analysis document was sent to approximately 400 people over a four month period from May through August 1991.

### **Interviews, Meetings, and Newspaper Articles**

Numerous articles were published in local and regional papers covering the planning process. In addition, open houses, informal meetings, personal interviews, and telephone conversations with interested organizations and individuals occurred throughout this process. Approximately 3,200 responses were received from interest groups across the country during the three scoping efforts.

BLM representatives conducted 21 personal interviews with individuals concerned with management of the Rogue River.

Presentations were made by BLM representatives at public meetings to explain specific or general elements of the planning process and/or to discuss possible issues. This included 16 formal presentations to organizations and civic groups about the planning effort to revise the Hellgate RAMP.

A broad range of newspaper articles published during the 20-month scoping period were gathered and analyzed for topics of concern to the public. Two-hundred and thirty-seven (237) articles were collected, which either were entirely about the Hellgate Recreation Area or were about issues directly relating to the management of the section. Most articles were published locally in the Daily Courier, Daily Tidings, or the Mail Tribune.

### **Description of User/Visitor**

BLM received 2,701 written responses. These written responses were from five categories of users and/or visitors: pre-scoping responses (164 or 6 percent), general scoping responses (212 or 8 percent), Sneak Preview survey form responses (56 or 2 percent), MTB survey form responses (2,248 or 83 percent), and personal interviews (21 or 1 percent).



Most of the respondents were U.S. citizens (99 percent): out-of-state (43 percent), local (39 percent), and in-state, but not local (17 percent). Foreign visitors, representatives of national organizations and individuals not identifying an origin represented one percent.

The majority (93 percent) of the respondents were individuals followed by individuals associated with a business, government, or organization (5 percent). Data was unavailable on affiliation for two percent of the responses. Most responses were form letters (87 percent) and individual letters (11 percent). Interviews, other, and no data represented the remaining two percent of the responses.

## **User/Visitor Attitudes**

Public opinion as recorded and analyzed provided a substantial amount of information from the recreation user and/or visitor. Carrying capacity and allocation represented 93 percent of the identified issues. The next five issues of concern represented another five (5) percent of the identified issues: fishing and/or fisheries, socioeconomic benefits, erosion, safety, and noise. The 2,701 responses provided opinions about possible issues supported by approximately 50,000 reasons (i.e., supporting rationale for issue identification).

These issues and reasons translated into several areas of concern: possible impacts to river resources from visitor use, health and safety concerns, socioeconomic benefits, motorized versus nonmotorized boating, and the social carrying capacity of the river. Social carrying capacity relates to the question of the increased visitor use altering or degrading the recreational experience. The MTB service was clearly identified as the major point of controversy among users of the Hellgate Recreation Area. The common interests of all users and/or visitors were the opportunity to view scenery and wildlife, to be in a natural setting, and to enjoy the river. The following are summary descriptions of the feelings expressed by the five categories of users and/or visitors.

## **Prescoping Comments**

Over two-thirds of the respondents identified MTBs as the reason there was a carrying capacity and/or an allocation issue. These respondents either wanted MTB services eliminated, restricted, or managed to reduce perceived impacts. Approximately 20 percent of the respondents were concerned with a variety of other topics. Another five percent of the respondents were supportive of the MTB business as a component of the tourism industry and as a valuable contributor to the region's economic stability. They did not support restrictions to MTB operations and/or change to management of the MTB service. The last five percent were concerned with the possible pass-through and no-anchor zones the Oregon State Marine Board was considering as management tools.

## **General Scoping Comments**

One-third (32 percent) of the respondents identified MTB services as the reason there was a carrying capacity and/or an allocation issue. These respondents either wanted MTB services eliminated, restricted, or managed to reduce perceived impacts. Almost another one-third (26 percent) were supportive of the MTB business as a component of the tourism industry and as a valuable contributor to the region's economic stability. They did not support restrictions and/or change to management of the MTB services. Almost half (42 percent) of the respondents were concerned with a variety of other topics such as fisheries, safety, land use, erosion, or noise.

## **Sneak Preview Comments**

The large majority of the respondents commenting with the Sneak Preview forms felt they were being impacted by MTB operations. Over 70 percent of the commenters felt that MTBs created the following impacts: noise degrading peace and solitude, erosion destroying spawning habitat, disruption of fishing pleasure and rafting experiences, and unsafe situations from boat operations. Approximately 25 percent of the respondents did not feel that any of the above identified impacts were occurring. They were supportive of MTB services as a component of the tourism industry.



The respondents were more evenly divided in terms of their recommended management solutions with 43 percent feeling the MTB services should be eliminated, 41 percent feeling that MTB services should be reduced, and 13 percent feeling the MTB services should be maintained. No recommendations were provided by three (3) percent of the respondents.

## **Motorized Tour Boat Comments**

Almost all (approximately 98 percent) of the MTB respondents commented that they enjoyed a rewarding experience while visiting the Rogue River on a commercial jet boat. They supported the MTB business and said the service it provided to the public should be maintained at its present level. They felt that the river should be available to the public from a variety of methods (e.g., motorized and nonmotorized boating), or in general that the river should be managed to provide a variety of visitor use opportunities (e.g., a concept of multiple-use).

Many felt that this particular mode of visiting the river was their only opportunity for experiencing the river resources (e.g., young, elderly, handicapped, etc.), and that the expense of the trip was reasonable. They appreciated the educational and interpretive aspects of their trip through the information provided by the boat operator concerning historical and wildlife resources.

The large majority of these visitors felt safe during their visit to the Rogue River and that the MTBs were operated in a safe and courteous manner in relation to the other visitors to the river. Overall, few respondents felt any ecological or resource impacts were present on the river.

## **Personal Interview Comments**

This group identified a broad range of issues. Physical and biological impacts were identified along with social and economic issues.

## **Notice of Intent to Prepare Environmental Impact Statement**

The BLM published a notice of intent in the Federal Register on October 1, 1993, which described the intent to prepare the EIS and the need for the action, planning issues, and a range of alternatives. The BLM's environmental analysis approach evolved from an EA to an EIS effort due to the intense public controversy surrounding the issues.

Public responses on the process to revise the Hellgate river plan were analyzed for the seven-month period from October 1993 through April 1994. Eighty responses were received.

## **Issues and Alternatives Document**

The BLM published and distributed an issues and alternatives document May 9, 1994. This document refined the issues and alternatives previously identified in the preplan analysis and notice of intent. The deadline for the public comment period was extended from July 15, 1994 through September 1994.

Public responses on the process to revise the river plan for the Hellgate Recreation Area were analyzed for the five-month period from May through September 1994. Two-hundred and forty-five (245) responses were received.

## **Visitor Services**

In the interest of comprehensive detail, the issue of developing a new visitor center was incorporated into this DEIS. The proposed "Smullin Visitor Center" (proposed to be located at Rand) was examined in a separate NEPA document earlier in the planning process for the Hellgate RAMP/DEIS. This was necessary at the time to meet fiscal criteria for project funding. Since that time, funding has been secured, and will remain available until a record of decision is signed.



# BLM Public Outreach

## Environmental Assessment Scoping: May 28, 1991 through December 1992

<u>Date</u>	<u>Action</u>	<u>Approximate Number of People Involved</u>
05/91	BLM News Release on intent to revise Hellgate Recreation Area Plan dated May 29, 1991, "BLM seek river plan comments"	Distribuion list
05/91 - 08/91	Mailing of Preplan Analysis Document to Interested Public	40
05/91	BLM Briefing for BLM Advisory Council	10
06/91	Letter of Invitation from BLM Area Manager to be Involved in River Planning Process	1,400
09/91	BLM Presentation for Grants Pass and Josephine County Chamber of Commerce Board	10
09/91	BLM Presentation for North Valley Businesses Association	15
10/91	BLM Briefing for Middle Rogue Chapter, Association of Northwest Steelheaders	10
11/91	BLM Briefing for Josephine County Water Resources Advisory Committee	10
11/91	BLM Briefing for State of Oregon Rogue River Planning Coordination Group	5
12/91	BLM Briefing for Middle Rogue Chapter, Association of Northwest Steelheaders	10
10/92	Mailing of Visitor Use Inventory Background Paper for Revising Hellgate RAMP	90
01/92	BLM Presentation for Grants Pass Lions Club	30
01/92	BLM Presentation for Grants Pass Chapter, Northwest Rafting Association	30
02/92	BLM Presentation for Rogue River Guides	25
03/92	BLM Presentation at Annual Oregon Guides and Conference	70
03/92	BLM Briefing for Annual "Wild" Section Outfitter Meeting	25



03/92	BLM Briefing for Middle Rogue Chapter, Association of Northwest Steelheaders	10
04/92	BLM Presentation for Grants Pass Nordic Ski Club	20
04/92	BLM Briefing for Middle Rogue Chapter, Association of Northwest Steelheaders	10
06/92	BLM Presentation for Siskiyou Audubon Society	30
07/92	BLM Briefing for Galice/Grave Creek Small Miners Work Group Meeting	15
09/92	BLM Presentation for Eagle Point Lions Club	10
09/92	BLM Briefing for BLM Advisory Council	10
12/92	BLM Briefing for American River Council	2

### **Informal Environmental Assessment Scoping: January 1993 through September 1994**

01/93	Mailing of Rogue River Studies Program Background Paper for Revising Hellgate RAMP	700
01/93	Briefing for Grants Pass City Council	10
01/93	Briefing for Grants Pass Chapter, Northwest Rafting Association	20
02/93	Briefing for State of Oregon Rogue River Planning Coordination Group	10
02/93 - 08/93	Mailing of Fishery Resources Background Paper for Revising Hellgate RAMP	60
03/93	BLM Briefing for Annual "Wild" Section Outfitters' Meeting	25
03/93	BLM Presentation for Middle Rogue Chapter, Association of Northwest Steelheaders	40
03/93	BLM Briefing for Josephine County Planning Commission	5
03/93 - 07/93	Mailing of Scoping Document Background Paper for Revising Hellgate RAMP	240
04/93 - 05/94	Mailing of BLM Contracted Visitor Attitude Study conducted by Oregon State University	240
05/93	BLM Briefing for Middle Rogue Chapter, Association of Northwest Steelheaders	12
05/93	BLM Briefing for Grants Pass City Council	10
08/93	Briefing for Josephine County Ad Hoc Noise Committee	8



09/93 - 10/93	Mailing of Preparation Plan Which Included Detailed Information of Notice of Intent to Prepare an EIS	500
09/93 - 06/94	Mailing of Economics Effects Contract Study conducted by Economic Strategies Northwest	130
09/93	BLM News Release on notice of intent dated September 13, 1994, "BLM seeks Rogue River comments"	Distribution list

### **Environmental Impact Statement Scoping: October 1, 1993 through January 31, 1994**

10/93	Notice of Intent Published in Federal Register October 1, 1993	Distribution list
10/93	BLM Briefing for State of Oregon Rogue River Planning Coordination Group	20
10/93	BLM Briefing for Josephine County Agency Representatives	10
01/94	BLM Briefing for Middle Rogue Chapter, Trout Unlimited	12
01/94	BLM Presentation at Annual Oregon Guides and Packers Conference	60
01/94 - 06/94	Mailing of Agency Responsibility Background Paper for Revising the Hellgate RAMP	170
02/94	BLM Presentation for Merlin/North Valley Improvement Association	25
03/94	BLM Presentation for Grants Pass Lion's Club	30
03/94	BLM Briefing for Grants Pass City Council Meeting	15
03/94	BLM Presentation for Rogue Gateway Rotary Club	40
04/94	BLM Panel Presentation for Second Annual Northwest River Runner's Conference	40

### **Issues and Alternatives Document: May 9 through September 1994**

05/94	BLM News Release dated May 2, 1994, "Rogue River planners seek public's help"	Distribution list
05/94	Mailing of Issues and Alternatives Document	900
05/94	BLM Briefing for Josephine County Rural Planning Commission, May 23	5
05/94	BLM Panel Representation for Grants Pass and Josephine County Chamber of Commerce	40



06/94	BLM Paid Advertisements Announcing Open Houses Ashland Daily Tidings, Grants Pass Daily Courier, and the Mail Tribune	Newspaper's distribution lists
06/94	BLM Open House on Issues and Alternatives June 9, 1994 in Medford, Oregon	3
06/94	BLM Open House on Issues and Alternatives June 13, 1994 in Grants Pass, Oregon	35
06/94	BLM Briefing for Josephine County Rural Planning Commission, June 20	6
06/94	Mailing of Juvenile Salmonids Contracted Study conducted by Oregon Department of Fish and Wildlife	60
06/94	BLM Briefing for BLM Retiree's Tour	40
06/94	BLM Briefing for Grants Pass Active Club Officers	2
07/94	BLM Briefing for Josephine County Commissioners	2
07/94	BLM Briefing for Josephine County Rural Planning Commission, July 8 river float	7
07/94	Mailing of Erosion Contracted Study conducted by Oregon State University	180
08/94	BLM Briefing for Josephine County Rural Planning Commission, August 1	4
08/94	BLM Briefing for Josephine County Rural Planning Commission, August 15	7
09/94	Mailing of Motorized Tour Boat Background Paper for revising the Hellgate RAMP	117

**On-going Public Involvement Efforts: September 30, 1994 through  
January 1999**

01/95	Mailing of Sound Inventory Background Paper for revising the Hellgate RAMP	180
01/95	Mailing of Contracted Study of Attitudes of Land Owners by Southern Oregon State University	180
01/95	BLM Briefing for Merlin/North Valley Improvement Association, January 26	30
08/95	Mailing of Contracted Boating Safety and Conflicts Study by Water Resources Consulting	250
12/95	Mailing of Fall Chinook Impact Background Paper for revising the Hellgate RAMP	40
12/95	Mailing of Final Juvenile Salmonids Contracted Study conducted of the Oregon Department of Fish and Wildlife	15



12/95	Mailing of Final Visitor Use Background Paper for revising Hellgate RAMP	10
10/95	BLM Presentation for the American Institute of Hydrology	100
01/99	Mailing of Rogue River Currents - Planning Update	2,000
9/00	Smullin VC EA	158

On-going Public Involvement Efforts: September 30, 1994 through January 1999

60	Mailing of Final Visitor Use Background Paper for revising Hellgate RAMP	10
40	BLM Presentation for the American Institute of Hydrology	100
1	Mailing of Rogue River Currents - Planning Update	2,000
2	Smullin VC EA	158
3	Mailing of Final Visitor Use Background Paper for revising Hellgate RAMP	10
100	BLM Presentation for the American Institute of Hydrology	100
4	Mailing of Rogue River Currents - Planning Update	2,000
7	Smullin VC EA	158
117	Mailing of Final Visitor Use Background Paper for revising Hellgate RAMP	10

On-going Public Involvement Efforts: September 30, 1994 through January 1999

180	Mailing of Final Visitor Use Background Paper for revising Hellgate RAMP	10
120	BLM Presentation for the American Institute of Hydrology	100
40	Mailing of Rogue River Currents - Planning Update	2,000
12	Smullin VC EA	158



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# Glossary

Automatic and fast - Drawing or filling a box that will fit around a page of text is a breeze. The software does the math for you, so you can focus on the design.



Inflatable Kayak, 1988 - photo by Martin Hudson



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Figure 1. Rock 1988 - photo by Martin Hutton



**Access** - The ability of recreationists to reach areas to recreate.

**Aquatic habitat** - Standing or flowing water that satisfies survival requirements for terrestrial or aquatic species during at least a portion of their life cycle.

**Acquired lands** - Lands within the Rogue Wild and Scenic River corridor acquired by BLM under the authority of the Wild and Scenic Rivers Act. Acquired lands are closed to mineral entry.

**Administrative rules** - Regulations established by State agency boards and commissions in accordance with Oregon Revised Statutes.

**Agricultural, forestry, commercial, or industrial sound generators** - Equipment, facilities, operations or activities employed in the production, storage, handling, sale, purchase, exchange, or maintenance of a product, commodity, or service.

**Alevin** - Newly hatched salmon or trout, with exterior yolk sac, residing in the gravel prior to emergence to the stream.

**Allocation** - Apportionment of types and levels of use to individual users at specific times; usually necessary when levels of use exceed carrying capacity (e.g., acceptable limits and established standards).

#### Allocation Methods

**Combination Method**- A combination of allocation methods might be used to fit the particular circumstances of a river system. For example, historical use data might be used to allocate river usage. Use might then be allocated among boaters using the freedom of choice method or an even-split method.

**Even-Split Method**- Under an even-split method, an equal percentage split is used for various user groups. For example, use might be split 50-50 between guided parties and nonguided parties. This method has the advantage of understandable fairness in that things are evenly split. However, it has a substantial potential for dislocation of user groups that have historically had more than a 50 percent share of the use. A split that dislocates user groups may cause these groups to view the allocation as "unfair."

**Historical Use Method**- Under this method, historical use patterns are examined to see how use among user groups has, in fact, been split. This historic split is then carried forward into the future. Historic use may be the method which results in the least dislocation to each of the user groups, since it recognizes existing use patterns, and each user group will share increases or decreases in use levels proportionately. One of its primary disadvantages is that it freezes use allocations at a point in time and may not take into account changing conditions or patterns of use by user groups.

**Total Common Pool**- Under the total common pool, all private users have an equal chance to obtain a permit. That person then has a choice of whether or not to use a guide. A member of the public is able to choose the precise recreational experience desired. Under other allocation methods, a person obtaining a permit may not be able to choose the precise experience that he or she wants.

Except for limits, this informal method is the one presently used in the Hellgate Recreation Area (i.e., all visitors decide whether to use commercial guided services or not).

**Alternatives** - Different management options.

**Ambient sound** - All-encompassing sound associated with a given environment, usually consisting of a composite of sounds from various sources near and far.



**Anadromous fish** - Fish that migrate as adults from the ocean into fresh water streams to reproduce young, which return to the ocean to grow to maturity. Salmon and steelhead are examples.

**Anchoring prohibited zones** - A measure to promote the safe navigation of all watercraft in an area by prohibiting boat anchoring within a specific area of the shoreline and within a specific timeframe. Three anchoring prohibited zones have been established within the Hellgate Recreation Area by the Oregon State Marine Board: Applegate confluence area, Whitehorse Riffle area, and the Highway Hole. No person shall anchor a boat, except within 10 feet of the shoreline, within these three zones between August 1 and September 30.

**Angling enhancement zones** - An element of some alternatives to enhance angling watercraft recreational experience during the primary fishing seasons by prohibiting boat anchoring within a specific area of the shoreline during the primary fishing seasons. These zones could be accomplished through special BLM stipulations for commercial users and education for private users, which are methods of encouragement rather than regulation.

Most angling enhancement zones are outside the motorized tour boat season of use. Their objective is for the maximum number of anglers to have an opportunity to use prime fishing holes. This objective is accomplished similar to anchoring prohibited zones, which is to prohibit people from anchoring a boat, except within 10 feet of the shoreline, within these zones during the primary fishing seasons (i.e., January 15 through April 15 and August 15 through September 30). With angling enhancement zones, however, management could be through special BLM stipulations for commercial users and education for private users, which both are methods of encouragement rather than regulation.

**Analysis file** - Records of the scoping and analysis process conducted in the preparation of a NEPA document; typically stored at the BLM office that issued the final decision.

**Annual daily schedule** - An element of some alternatives that establishes a permit stipulation requiring a schedule, the purpose being to inform other users of the approximate time motorized tour boats (MTBs) plan to pass certain points on the river. Under the proposal, MTB groups/runs would provide the schedule to BLM by April 1 prior to each use season, as opposed to the current system, which requires written permission for schedule variances.

**Applegate Reach** - See river reach.

**Aquatic** - Living or growing in or on the water.

**Archaeological site** - Geographic locale containing structures, artifacts, material remains, and/or other evidence of past human activity.

**Artificial structures** - Constructed cavities, such as bird houses, that provide shelter for wildlife.

**At-risk-fish stocks** - Anadromous salmon and trout identified by professional societies, fish management agencies, and scientific literature as needing special management conditions because of their low or declining populations.

**Back Country Byway** - A road segment designated as part of the BLM National Back Country Byway System.

**Baseline** - Starting point for analysis of environmental consequences; may be the conditions at a point in time (e.g., when inventory data is collected) or the average of a set of data collected over a specified number of years.



**Basic site protection measures** - Engineering techniques designed to reduce or control recreation impacts. In campsites, basic site protection measures could include tent pads, toilets, footpaths, steps, and vegetative plantings (also see Campsite Hardening).

**BLM-administered lands** - Any land or interest (e.g., property with scenic easements) in land managed by the federal government and administered by the Secretary of the Interior through the BLM.

**Big game** - Large mammals that are hunted, such as Roosevelt elk, black-tailed deer, and black bear.

**Biological corridor** - A habitat band linking areas reserved from substantial disturbance.

**Boat** - All floating watercraft.

**Boater** - Any person who utilizes floating watercraft for river transportation.

**Boater pass** - A permit required by BLM to operate or ride in any watercraft or engage in any camping, fishing, or other activity connected with boat transportation within the Hellgate Recreation Area.

**Boater fee** - A fee required by BLM to launch, operate, or ride in any watercraft or engage in any camping, fishing, or other activity connected with boat transportation within the Hellgate Recreation Area.

**Bureau-assessment species** - Plant and animal species on List 2 of the Oregon Natural Heritage Data Base, or those species on the Oregon List of Sensitive Wildlife Species (OAR 635-100-040) that are identified in BLM Instruction Memorandum Number OR-91-57 and are not included as Federal candidate, State listed, or Bureau-sensitive species.

**Candidate species** - Those plants and animals included in Federal Register Notices of Review that are being considered by the U.S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Services (NMFS) for listing as threatened or endangered.

**Campground, developed** - An area having designated campsites and specified for both day and overnight use. It contains improvements for camper comfort and sanitary facilities, such as toilets, drinking water, tables, and trash receptacles.

**Camp areas, primitive** - An area without designated campsites and specified for both day and overnight use. It may or may not have improvements for camper comfort or sanitation.

**Camping** - Outdoor living for recreation.

**Campsite hardening** - Measures to reduce camper impact on the natural resources. Example: paving a footpath (see Basic Site Protection Measures).

**Campsite quality rating** - Evaluation of the characteristics of a campsite, such as size, slope, presence of shade, and overall desirability for human use.

**Campsite rehabilitation** - Measures to restore damaged campsites and to prevent further damage to natural resources. Example: planting grass and shrubs.

**Campsite, suitable** - A site with soil, vegetation, and slope conditions capable of accommodating camping use without causing significant damage to the basic resources.



**Campsite, undeveloped** - An area designated for day and overnight use. It contains no improvements for camper comfort or sanitation.

**Carrying capacity** - Number of specified units, such as boats or people, allowed in a described area for certain purposes. The concept is not a goal, but rather a means for pursuing specified goals.

**Casual use** - Activities ordinarily resulting in negligible disturbance of federal lands and resources.

**Cavity excavator** - A wildlife species that digs or chips out cavities in wood to provide a nesting, roosting, or foraging site.

**Cavity nester** - A wildlife species that nests in cavities.

**Chemical spills** - Accidental releases of chemical products that have the potential for damaging natural or human resources.

**Client** - A paying member of a guided or outfitted group.

**Congressionally-designated areas** - Areas that require congressional enactment for their establishment. Examples: National wilderness areas, National wild and scenic rivers, and National recreation areas.

**Commercial use** - The use of public lands and related waters for business or financial gain.

**Commodity resources** - Goods, products, or services of economic use or value.

**Community stability** - Capacity of a community (incorporated town or county) to absorb and cope with change without major hardship to institutions or groups within the community.

**Concern** - A management topic of public interest that is not well enough defined to become a planning issue and does not involve either controversy or dispute over resource management activities or allocations nor lend itself to designating management alternatives. A concern may be addressed in analysis, background documents, procedures, or a noncontroversial decision.

**Consistency** - The adherence, under the Federal Land Policy and Management Act, of BLM resource management plans to the terms, conditions, and decisions of officially approved and adopted resource related plans, or in their absence, with policies and programs of other federal agencies, state and local governments and Indian tribes, so long as the plans are also consistent with the purposes, policies, and programs of federal laws and regulations applicable to BLM-administered lands.

**Conservation release season** - Time for releasing water either stored or held back during the conservation storage season. The release season is based upon stream flow and temperature objectives, primarily for fishery enhancement. Release for Applegate and Lost Creek reservoirs, as set by the United States Army Corps of Engineers, is May 1 through October 31.

**Conservation storage season** - Time when water is stored or held back for release at later time to meet water needs for fishery enhancement, irrigation, or municipal and domestic water uses. Storage season for Applegate and Lost Creek reservoirs, as set by the United States Army Corps of Engineers, is February 1 through April 30. Storage allocations during the conservation season total 180,000 acre feet (i.e., 125,000 acre feet for fishery enhancement; 35,000 acre feet for future irrigation needs; and 20,000 acre feet for future municipal and domestic water needs).



**Council of Environmental Quality (CEQ)** - An advisory council to the President established by the National Environmental Policy Act of 1969. It reviews federal programs for their effect on the environment, conducts environmental studies, and advises the President on environmental matters.

**County lands** - Any land or interest in land managed by a specific county, such as Josephine County for this plan.

**Crucial habitat** - Habitat that is basic to maintaining viable populations of fish or wildlife during certain seasons of the year or specific reproduction periods.

**Cultural resources** - Remains of human activity, occupation, or endeavor reflected in archaeological or historic districts, sites, structures, buildings, objects, artifacts, ruins, works of art, and architecture; and natural features of importance in past human activities and cultural practices. Cultural resources consist of: (1) physical remains; (2) locations of significant human events in the past, or locations for traditional cultural practices, even though physical evidence of those events and practices may not exist; and (3) those elements of the natural setting that contribute to a site's historic cultural significance.

**Cumulative effect** - Environmental impact from the incremental impact of the identified actions added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative effects can result from individually minor, but collectively significant, actions occurring over a period of time.

**Daily use** - Time of day when a permitted activity is prescribed to occur.

**Day-use area, developed** - An area designated as day-use only. It contains improvements for comfort and sanitary facilities, such as toilets, drinking water, tables, and trash receptacles.

**Day-use area, undeveloped** - An area designated as day-use only, but without improvements for comfort or sanitation.

**Day-use parking pass** - An element of some alternatives requiring an annual permit by BLM when parking in BLM-administered day-use areas, including camping areas, within the Hellgate Recreation Area.

**Dedicated fund** - A common pool of monies from fees collected by all the managing agencies and only expended for the benefit of the resources and users of the Hellgate Recreation Area. BLM's participation would require congressional legislation.

**Desired future condition (DFC)** - A vision of the desired future state of a specific area that gives managers goals for the area while recognizing the dynamic state of the ecosystem, instead of listing numerical outputs as goals.

**Dispersed recreation** - Outdoor activities that occur over relatively large areas. Facilities or developments are provided primarily for access and protection of the environment rather than user comfort or convenience.

**Diversity** - The distribution and abundance of different plant and animal communities and species within an area.

**Dummy camps** - Unoccupied campsites where persons have left objects to give the appearance of occupancy with the intent to claim possession at a later time.

**Dunn Reach** - See river reach.



**Economic input-output model** - A model showing linkages between sectors of an economy, including exports from the economy. The model is useful in evaluating how changes in final demand affect the total economy activity within an impact area.

**Economic impact area** - For purposes of this plan, Jackson and Josephine counties.

**Economic impact coefficients** - Factors affecting the economy, such as dollars earned and or spent and jobs created and or abolished. Dollar and job coefficients were developed for every 10,000 visitors in several different recreational activity types and lodging types within the Hellgate Recreation Area. For example, the job coefficient for every 10,000 private floater (i.e., visitor days) is 2.69; 10.76 jobs would be created in Jackson and Josephine counties for 40,000 private floaters using the recreation area in one year.

**Effects** - Impacts or consequences occurring directly, indirectly, or cumulatively in the following categories: aesthetic, historic, cultural, economic, social, health, or ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems).

**Direct and Indirect Effects**- Direct and indirect effects are the consequences expected to occur from implementation of each alternative. Direct effects are caused by the action and occur at any one time and place. Indirect effects are caused by the action and occur later in time and place, or in distance.

**Endangered species** - Any species in danger of extinction throughout all or a significant portion of its range, and identified by the Secretary of the Interior as endangered in accordance with the 1973 Endangered Species Act.

**Environmental analysis** - An evaluation of alternative actions and their predictable short-term and long-term environmental effects, incorporating physical, biological, economic, and social considerations.

**Environmental impact** - The positive or negative effect of any action upon a given area or resource as measured relative to the existing condition.

**Environmental impact statement (EIS)** - A formal document filed with the U.S. Environmental Protection Agency that considers significant environmental impacts expected from implementation of federal actions (i.e., alternatives or management options).

**Ephemeral streams** - Streams that contain running water only sporadically, such as during and following storm events.

**Erosion** - Detachment and movement of soil or rock fragments by water, wind, ice, gravity, people, watercraft, and vehicles.

**Erosion sensitive areas** - An element of some alternatives to inventory and manage erosion-prone riverbank areas (e.g., areas having limited or severe erosion potential).

**Extensive recreation management areas (ERMAs)** - All BLM-administered lands outside special recreation management areas, possibly including developed and primitive recreation sites with minimal facilities.

**Fall chinook sensitive areas** - An element of some alternatives to inventory and manage specific areas where fall chinook spawn. Approximately 14 percent of all fall chinook entering the Rogue River spawn in suitable habitat locations within the Hellgate Recreation Area. An average of 2,300 fall chinook spawn annually in the 3 miles of the Rogue River between Lathrop Park near Grants Pass, Oregon, and the mouth of the Applegate River. Another 5,400 spawn in the river between Applegate River and Hog Creek. Relatively little suitable spawning habitat is found in the 14.1-river miles between Hog Creek and Grave Creek.



**Fire hazard** - A fuel complex defined by kind, arrangement, volume, condition, and location that forms a threat of ignition, spread, and difficulty of suppression.

**Fire protection** - Prevention efforts to protect an area from wildfire, including public contact, patrol, sign posting, and regulated use closures. A common requirement in southwest Oregon is a regulated use closure of allowing campfires only in areas maintained and designated as developed overnight camping areas.

**Fire risk** - The chance of potential ignition sources to cause a fire that threatens valuable resources, property, or life.

**First mate** - Additional person on a motorized tour boat to assist the boat operator.

**Fish-bearing streams** - Stream that has fish present for a portion of the year as part of their life cycle.

**Float-in campsite** - A campsite accessible only by watercraft. Minimum development is a pit toilet; maximum development may include pit toilets, fire pits, picnic tables, and trash cans.

**Flood season** - Most likely time for an area to flood; for Rogue River, usually November 1 through January 31.

**Floodplain** - Level lowland bordering a stream or river that is subject to flooding with water fluctuations.

**Fry** - Tiny fish, measuring approximately an inch long, that emerge from the gravel after the alevins deplete their yolk sac. Fry stay in calm pools of water to search for food.

**Goal** - The purpose of directing an effort.

Under all alternatives, the goal for the Hellgate Recreation Area is to allow for continuation of compatible uses, while providing a wide range of public outdoor recreational opportunities and minimizing conflicts. These recreational opportunities would be provided to the extent that they do not substantially impair the natural beauty of the river area; do not diminish its aesthetics, fish and wildlife, scientific, and recreational values; and consider the rights and interests of private property owners.

**Gravel recruitment** - Downstream movement of gravel caused by high volume of water flow.

**Ground cover** - Grasses or other plants that stabilize soil, preventing the soil from being blown or washed away.

**Groups (runs)** - Motorized tour boats scheduled to travel together to limit the duration of encounters with other users.

**Group/party size** - The number of people in a boating or camping trip, including guides and any support personnel.

**Guide** - A person who, for a fee, provides services by leading one or more persons in outdoor recreation activities.

**Guide permit** - A license issued by the Oregon State Marine Board to provide guide services.

**Habitat** - Type of environment where certain plants or animals live.



**Hellgate Recreation Area** - A 27-mile corridor of the Rogue River, from approximately its confluence with the Applegate River to Grave Creek, determined by Congress to meet the objectives for a recreational river in the National Wild and Scenic Rivers System. The area encompasses about 5,500 acres of BLM-administered land (see Wild and Scenic Rivers System).

**Historic site** - Areas or sites relating European, American, and Asian immigrants to southwest Oregon.

**Impact** - A spatial or temporal change in the environment caused by human activity (see Effects).

**Instream water right** - A legal right to the use of water that remains in the stream, such as for fish, recreation, or pollution abatement.

**Interdisciplinary team** - A group of individuals, each knowledgeable in various disciplines, who are assembled to solve a problem or perform a task. This team concept recognizes that no single scientific discipline is sufficiently broad enough to adequately analyze the situation and propose actions (see Alternatives).

**Interim stipulation** - Temporary guidance to protect resource values until guidelines are established through the planning process. Interim stipulations were established in 1990 for the two MTB special recreation permits (MRP-208 and MRP-216). These stipulations were part of the permits pending the completion of an indepth study of jet boat use on the Rogue River within the Hellgate Recreation Area.

**Intermittent stream** - A stream that flows most of the time, but occasionally is dry or reduced to pools.

**Interpretive services** - Methods of putting information into a form that visitors have the ability and desire to understand.

**Issue** - A subject or question of widespread public discussion or interest regarding management of a geographic area, usually identified during scoping and addressed in alternative design. Issues can be unresolved questions about management actions and/or a resource use that may have significant or unacceptable environmental impacts.

**Josephine County Noise Advisory Committee** - A committee formed in 1993 at the request of the Josephine County Board of Commissioners to prepare a county noise control ordinance.

**Landing site** - Riverbank location where boats are taken from the river.

**Launch site** - Riverbank location where boats are placed on the river.

**Limited entry system** - A system that restricts the number of participants in an activity to meet certain management objectives.

**Long term** - The period starting 10 years beyond implementation of the revised Hellgate Recreation Area Management Plan.

**Locatable minerals** - Minerals (including valuable deposits of gold, silver, and other uncommon minerals) subject to exploration, development, and disposal by staking mining claims as authorized by the Mining Law of 1872 (as amended).

**Management presence** - Means of conveying to visitors which agency manages an area. The most common form of management presence is onsite uniformed personnel.

**Mineral estate** - Ownership of the minerals at or beneath the surface of the land.



**Minimum streamflow** - Quantity of water needed to maintain existing and planned in-place uses of water in or along a stream channel or other water body and to maintain the natural character of the aquatic system and its dependent systems.

**Mining claims** - Portions of public lands claimed for possession of locatable mineral deposits by locating and recording under established rules and pursuant to the 1872 Mining Law.

**Mitigating measures** - Actions to avoid, minimize, reduce, eliminate, or rectify adverse impacts of management practices.

**Monitoring/evaluation** - Orderly collection and analysis of data to evaluate the progress and effectiveness of on-the-ground actions in meeting management objectives.

**Motorized boating** - Boating that involves motorized watercraft, regardless of the motor's horsepower rating (see Nonmotorized boating). The "kicker" (a small horsepower motor) presently used by some drift boat anglers is considered motorized.

**Motorized fishing boat (MFB)** - Motorized fishing craft for commercial use. The boat operator is usually an "operator of an uninspected passenger vessel" (OUPV). A "six pack" or an OUPV license is required of fishing guides or charter vessel operators to carry six or fewer paying passengers. The U.S. Coast Guard issues the licenses.

**Motorized tour boat (MTB)** - Any motorized boat carrying seven or more paying passengers. An MTB operator must have at least a "limited master's" license issued by the U.S. Coast Guard. All MTBs have been issued a certificate of inspection (COI) by the Coast Guard. The COI lists conditions that MTBs must satisfy to comply with applicable laws, rules, and regulations relating to safe construction, equipment, manning, and operation. The COI also requires MTBs be in a seaworthy condition for the services they are operated.

**Motorboat sound levels** - Levels of sound (measured in decibels by a stationary test) that are emitted during operation of motorboat engines, the maximum allowed being 90 dBA for engines manufactured prior to January 1, 1993 and 99 dBA for engines manufactured that date or later (see Sound level/loudness), with exemptions possible for special activities, such as regattas, boat races, or speed trials.

**Motor vehicle** - Any self-propelled vehicle, including motorized boats and aircraft.

**Multiple use** - The use of land or water resources for more than one purpose (e.g., in the case of recreation, such as angling, floating, motorized boating, and homeowner activities).

**National Environmental Policy Act (NEPA)** - An act passed in 1969 declaring a national policy that encourages productive and enjoyable harmony between humankind and the environment, promotes efforts that prevent or eliminate damage to the environment and biosphere, stimulates the health and welfare of humanity, enriches the understanding of the ecological systems and natural resources important to the nation, and establishes a Council on Environmental Quality.

**National Register of Historic Places (NRHP)** - Official list established by the Historic Preservation Act of 1966 that identifies the nation's cultural resources worthy of preservation.

**Native species** - Plants or animals that are natural to an area.

**Noise** - Any sound that is unwanted by the listener, presumably because it is unpleasant or bothersome, interferes with the perception of the wanted sound or is physiologically harmful.

**Noise standards** - Measurements of sound used to determine point at which sound becomes unpleasant or bothersome to humans.



**Noncommercial** - Activity with bona fide cost sharing among all participants (see Private Use).

**Nongame wildlife** - All wild vertebrate and invertebrate animals not subject to sport hunting or trapping (furbearers).

**Nonmotorized boating** - Boating that involves use of a watercraft without any type of motor (see Motorized Boating).

**No-trace recreation** - Art of enjoying the outdoors while leaving as little sign of use as possible.

**No-wake zone** - An area where boat speed is reduced to 5 mph or less to minimize the wake. In these zones, boats are to proceed off plane and at such a speed so that a minimal wake is generated. No wake zones are intended to minimize soil erosion in erosion sensitive areas and are in place near swimming areas and boat launch points to prevent disturbance to others.

**Noxious plant** - Any plant designated injurious to public health, agriculture, recreation, wildlife, or any public or private property.

**Number of trips** - Part of alternative design that refers to watercraft trips; round trips for motorized tour boats, either one-way or round for other motorized watercraft, and one-way trips for nonmotorized float craft.

**Number of visitors** - Estimated annual number of visitors resulting from the different alternatives, but not part of alternative design. The number of visitors is an environmental consequence (see Visitor Use).

**Notice display** - A stipulation of motorized tour boats requiring them to inform other users of the number of boats in a group and their sequence. The notice must be displayed by the lead MTB of each group/run and be legible from both riverbanks, clearly indicating the number of boats in, or following, the group.

**O & C lands** - Public lands granted to the Oregon and California Railroad Company and subsequently reverted to the United States.

**Objectives** - Goal-based standards to measure or monitor the success of the management plan.

**Off-highway vehicle (OHV)** - Any motorized vehicle capable of, or designed for, travel on or immediately over land, water, or other natural terrain, excluding emergency vehicles and vehicles in official use.

**Off-plane area** - An area (i.e., one with areas of heavy traffic or where passage is narrow) where boats are required to slow down. Also a BLM stipulation for MTBs requiring boats be off plane (slowed) in Hellgate Canyon. Boats proceed off plane at a safe speed where wake is not a critical factor in areas of heavy traffic or where passage is narrow.

**Off-highway vehicle designation** -

**Open** - Designated areas and trails where off-highway vehicles may be operated subject to operating regulations and vehicle standards set forth in BLM Manuals 8341 and 8343.

**Limited** - Designated areas and trails where off-highway vehicles are subject to restrictions limiting the number or types of vehicles, date and time of use; limited to existing or designated roads and trails.

**Closed** - Areas and trails where off-highway vehicles are permanently or temporarily prohibited, except for emergency use.



**Onsite management** - Regulations, restrictions, facilities, policies, services, or controls that limit or influence how people use an area or resource.

**Oregon scenic waterways** - Waterways selected, per the Oregon Scenic Waterways Act of 1970, for protection or enhancement of special river attributes. The act was initiated by a citizens' initiative and places primary emphasis on aesthetic, scenic, fish and wildlife, scientific, and recreational features. An 84-mile reach of the Rogue River—from the Applegate River downstream to Lobster Creek Bridge—was one of the original six scenic waterways. Administration of scenic waterways, including a distance of 0.25 mile from each riverbank, is mandated to maintain the existing character of the river environment.

**Outfitter** - A commercial dealer providing guides, equipment, or supplies for outdoor recreational activities (e.g., angling, camping, fishing, and floating).

**Outstandingly remarkable values (ORV)** - Values among those listed in section 1(b) of the Wild and Scenic Rivers Act: "scenic, recreational, geological, fish and wildlife, historical, cultural, or other similar values...." Similar values may include: ecological, biological or botanical, paleontological, hydrological, scientific, or research values.

The outstandingly remarkable values for the Hellgate Recreation Area, a recreational river, are its natural scenic qualities, fisheries resource, and recreational opportunities. Federal managers also consider the wildlife and cultural resources in the area to be significant even though not specifically noted by Congress. The goal of the Hellgate Recreation Management Plan is to protect and enhance its ORVs.

**Paleontological resource** - Remnants of life from past geological ages as seen in fossils of plants and animals.

**Partnerships** - Two or more individuals or groups in cooperation with one another because of a common interest in a river resource or some management facet. The cooperation may involve issue identification, inventories and studies, alternative design, ownership, funding, staffing, and management.

**Pass-through zone** - An area of streambank where boaters are prohibited from stopping as a means of enhancing the safe navigation of all watercraft in an area. In this defined length of the river, all floating watercraft are prohibited from anchoring, stopping, or holding from August 1 through September 30.

**Peak flow** - The highest amount of stream or river flow occurring in a year or from a single storm event.

**Performance evaluation** - An annual evaluation conducted by BLM on the professional performance of a permittee (outfitter) as a means of assuring compliance with permit stipulations and regulations concerning public safety.

**Perennial stream** - A stream that typically has running water on a year-around basis.

**Permittee** - An outfitter who holds a permit from BLM to use BLM-administered land or water for financial gain.

**Permit system** - A method of regulating use (e.g., allocation) of a public resource through issuance of permits.

**Personal income** - The income received by all individuals in the economy from all sources, including wages and salaries, proprietors' income, rental income, dividends, personal interest income, and the difference between transfer payments (payouts) and personal contributions for social insurance.



**Plan amendment** - A change in the terms, conditions, or decisions of a resource management plan.

**Plan maintenance** - Any documented minor change that interprets, clarifies, or refines a decision within a resource management plan, but does not change the scope or conditions of that decision.

**Personal watercraft** - A small class "A" motorboat that: 1) uses an outboard motor or an inboard motor powering a water ski pump as its primary source of power; and 2) is designed to be operated by a person sitting, standing, or kneeling on a vessel unlike the conventional manner of sitting or standing inside a vessel; includes jet skis. Personal watercraft are prohibited in the Hellgate Recreation Area.

**Planning area** - All lands within the Hellgate Recreation Area boundary; however, BLM planning decisions apply only to BLM-administered lands and mineral estate.

**Planning issue** - See Issue.

**Prehistoric** - Generally refers to the time before written records. In Oregon, this term specifically refers to the history of Native American peoples before the Euro-American arrival (i.e., prior to about 1850 on the Hellgate Recreation Area).

**Prescribed fire** - A fire burning within an approved, predefined, and planned prescription as the result of either a planned or natural ignition.

**Private use** - The use of public lands and related waters in which there is no business involvement or financial gain (see Noncommercial).

**Private motorized boating** - Noncommercial motorized boating (see Noncommercial).

**Proposed threatened or endangered species** - Plant, animal, or fish species proposed by the USFWS or the NMFS to be biologically appropriate for listing as threatened or endangered under the Endangered Species Act (1973 as amended), and published in the Federal Register. It is not a final designation.

**Public contact person** - An individual assigned to provide information to the public in person.

**Public domain lands** - Original holdings of the United States that were never granted or conveyed to other jurisdictions or that were reacquired by exchange for other public domain lands.

**Public lands and related waters** - Lands and interest in lands administered by the BLM. Related waters are waters that lie directly over or adjacent to public lands and require some management control to protect federally-administered resources or to provide for enhanced visitor safety (see BLM-administered lands).

**Racing-motorboat testing areas** - Areas on the river where tests of racing motorboats are allowed. There are presently two racing-motorboat testing areas within the Hellgate Recreation Area (a primary area 0.5 miles upstream from Finley Bend to a point approximately 1 mile above the mouth of the Applegate River; and a secondary area between Flanagan's Slough and Finley Bend).

**Raptor** - Any of the birds of prey, including eagles, hawks, falcons, and owls.

#### Rationing Techniques

**Bid and Prospectus** - This rationing technique would probably only be appropriate to allocate use among guides. Use could be allocated to guides by using various merit factors, such as experience, quality of equipment, financial condition, or on the amount the guide would be



willing to pay to obtain permits or a combination of both. It has the advantage of obtaining the best qualified guides and a higher economic return for the use of a public resource. It could increase the economic burden to guiding businesses.

**Combination-** Under particular circumstances, a combination of rationing methods might be appropriate. For example, if the allocation method was the total common pool method, one block of permits might be set aside for distribution by lottery (e.g., well in advance of the recreational season) to allow people to plan in advance, and another block might be set aside for distribution on a first-come/first-served basis on the day of use to accommodate spur of the moment recreationists.

**First-Come/First-Served (Queuing)-** Under this method, a premium is placed on time. To get a permit, users must go to the place where permits are issued and may have to wait in line. Queuing (i.e., waiting in line) is like pricing in that it allows individuals to assess the value of a resource in relationship to their willingness to pay; however in this case, time rather than money is traded for the desired commodity.

**Historic (Grandfathering)-** This system would probably only be used to allocate use among guides. Guides that were able to establish historic use in the area would be allocated a permit. Guides who were grandfathered would clearly benefit and guides who were not would be displaced. Each guide with a permit could receive an equal number of watercraft days or a proportionate number of watercraft days could be assigned based on the historic size of their operation.

**Lottery-** Using a lottery technique, all applicants have an equal chance to participate since the selection is random. It has the advantage of treating all people equally. However, to the extent that there are other goals, such as giving preference to first-time users, experienced people, or in-state residents, it may not meet those objectives.

**Pricing-** Under this technique, prices for permits are set at a level high enough to achieve the desired level of use. This method has the advantage of raising more money to manage the system. However, it discriminates against those who are unable to afford the price or do not wish to pay the price.

**Reservations-** Reservations set a premium on planning. Write-in and phone-in applications may be used in this system. This method has the advantage of allowing people to plan well in advance, but it penalizes those that may want to make a spur of the moment trip.

**Rearing habitat** - Areas in rivers or streams where juvenile salmon and trout find food and shelter to live and grow.

**Recreation** - Use of leisure time to provide personal satisfaction and enjoyment and contribute to the renewal and refreshment of one's body, mind, and spirit.

**Recovery plan** - A management strategy for the conservation and survival of an endangered or threatened species listed under the Endangered Species Act, the purpose being to improve the status of the species to make continued listing unnecessary.

**Recreation opportunity spectrum (ROS)** - A framework for stratifying and defining classes of outdoor recreation environments, activities, and experience opportunities. The settings, activities, and opportunities for obtaining experiences have been arranged along a continuum or spectrum divided into seven classes: Primitive, Semiprimitive Nonmotorized, Semiprimitive Motorized, Roaded Modified, Roaded Natural, Rural, and Urban.

National wild and scenic rivers are classified as either wild, scenic, or recreational (see Wild and Scenic Rivers System). These three types of classifications are normally managed for a certain range of recreation opportunities:



**Recreational River** - Roaded Natural, Rural, and Urban.

**Scenic River** - Semi-primitive Nonmotorized, Semi-primitive Motorized, and Roaded Natural.

**Wild River** - Primitive and Semi-primitive Nonmotorized.

**Recreational river** - See Recreation Opportunity Spectrum and Wild and Scenic Rivers System.

**Recreation site** - A setting that provides an opportunity for enjoying the outdoors.

**Resource management plan (RMP)** - A land use plan prepared by the BLM under current regulations in accordance with the Federal Land Policy and Management Act. The revised Hellgate Recreation Area Management Plan will amend and/or tier to the BLM Medford District Resource Management Plan.

**Right-of-way** - An authorization for the use of public lands for specific purposes such as pipelines, roads, telephone lines, electric lines, reservoirs, and communication sites.

**Riparian management area** - An area allocated in the resource management plan primarily to protect the riparian zone and/or streamside.

**Riparian zone** - Terrestrial areas where the vegetation complex and microclimate conditions are products of the combined presence and influence of perennial and/or intermittent water, associated high water tables, and soils that exhibit some wetness characteristics. Normally used to refer to the zone where plants grow rooted in the water table of rivers, streams, lakes, ponds, reservoirs, springs, marshes, seeps, bogs, and wet meadows.

**River community areas** - Areas identified, and now managed, by the Oregon State Parks and Recreation Department under the Oregon Scenic Waterways system. River community areas within the Hellgate Recreation Area include platted subdivisions and plotted tracts existing in 1970.

**River ranger** - A uniformed person with citation authority assigned to do law enforcement on BLM-administered land or water within the Hellgate Recreation Area.

**River reach** - An element of some alternatives that divides the Rogue River into the Applegate Reach and the Dunn Reach for the purpose of analysis and management in the Hellgate Recreation Area. The Applegate Reach is the upper river stretch, at the start of the Hellgate Recreation Area (a small distance upstream of the Applegate River) to Dunn Riffle (between the downstream side of Hellgate Canyon and the start of Dunn Riffle). The Dunn Reach is the lower river stretch from Dunn Riffle to the Grave Creek Boat Landing.

**Rogue River studies program** - A comprehensive studies program, including contracted and agency inventories and studies, that represents the facts of the planning process used in revising the Hellgate Recreation Area Management Plan.

**Roving interpreter** - Uniformed personnel, similar to a park ranger, who shares information with visitors in a recreation area.

**Rural interface areas** - Areas where BLM-administered lands are adjacent to or intermingled with privately-owned lands that either already have residential development or are zoned for 1- to 20-acre lots.

**Sac-fry** - See Alevin.



**Safety sites of concern (SOC)** - An element of some alternatives that identifies areas on the Rogue River between Grants Pass and Grave Creek having boating safety concerns. Examples: channels that limit watercraft operational options; and bank conditions that limit line-of-sight.

**Salmonid** - A salmon or trout.

**Sanitation facilities** - Buildings or other installed structures (e.g., pit toilets, septic systems, and vault toilets) that ease collection and disposition of human waste.

**Scenic quality** - Relative worth of a landscape from a visual perception.

**Scenic river** - See Wild and Scenic Rivers System.

**Scoping** - Process of identifying significant issues relating to a proposal; includes eliciting public comment, evaluating concerns, and developing issues and alternatives for consideration.

**Season of use** - Part of the year when an activity may occur.

**Season of use for motorized boating** - An element of some alternatives that restricts commercial and private motorized boating to a part of the year as a means of limiting impact on fish spawning and enhancing boat fishing experience. The preferred alternative's season of use for all motorized boating, both commercial and private, is from May 1 through September 15 in the Applegate Reach; all year for private motorized boating in the Dunn Reach.

The season of use in the Applegate Reach was identified for special biological reasons. Spawning by fall chinook salmon in the Hellgate Recreation Area is from mid-September to late December (see Fall Chinook Spawning Areas/Sensitive Areas). The season of use for motorized boat traffic was identified due to concern that motorized boat traffic adversely impacts adult fall chinook spawning behavior. The season of use was also identified to enhance the nonmotorized boat fishing experience. Management would be through BLM regulations (e.g., prohibited acts).

**Sediment** - Soil, rock particles, and organic or other debris carried from one place to another by wind, water, or gravity.

**Sensitive wildlife habitat** - Habitat, such as riparian areas, that are crucial to wildlife for nesting, rearing, feeding, or cover.

**Short term** - Period of time during which the revised Hellgate Recreation Area Management Plan will be implemented; assumed to be 10 years.

**Shuttle driver** - A person who shuttles people or equipment (e.g., personal vehicles and watercraft) for a fee.

**Shuttle service** - Hauling of people, boats, vehicles, or other equipment for a fee.

**Smoke management** - Conducting a prescribed fire under suitable fuel moisture and meteorological conditions and with firing techniques to contain smoke impact on the environment within designated limits.

**Socioeconomic impacts** - Employment and income effects of different management options.

**Sound frequency/hertz** - Frequency is the rapidity or slowness of air vibrations (sound) that determines the sound's basic quality; the alternate push and relaxation against air is expressed as cycles per second (cps) or hertz (Hz).



**Sound level/loudness** - Weighted sound pressure level measured by use of a sound meter with an "A" frequency weighing scale, which most closely approximates what the human ear hears; reported as decibels.

**Sound management area** - Area where sound is managed. Management could be through special BLM stipulations for commercial users and/or education for private users.

**Sound sensitive property** - Property that is sound sensitive, such as residential property or property used for schools, churches, hospitals, public libraries, or other property that meets these criteria in more than an incidental manner.

**Special motorized boating uses** - Special motorized boating uses in the Hellgate Recreation Area are competitive watercraft events such as the Memorial Day and Labor Day races.

**Special recreation management area (SRMA)** - An area where a commitment has been to provide specific recreation activity and experience opportunities. These areas usually require a high level of recreation investment and/or management. They include recreation sites, but recreation sites alone do not constitute SRMAs. The BLM-administered portion of the National Wild and Scenic Rogue River is a SRMA.

**Species diversity** - The number, different kinds, and relative abundance of species.

**Stakeholders** - Individuals or groups with an interest in a river resource or in some aspect of river management (see Partnerships).

**Standard** - Criteria for measuring fulfillment of goals.

**State Historic Preservation Officer** - The state official designated to coordinate state historic preservation programs, including identification and nomination of eligible properties to the National Register and cooperation with federal agencies to ensure implementation of the National Historic Preservation Act of 1966.

**State lands** - Land or interest in land managed by a government agency for the State of Oregon.

**State listed species** - Plant or animal species listed by the State of Oregon as threatened or endangered pursuant to ORS 496.004, ORS 498.026, or ORS 564.040.

**Statewide Comprehensive Outdoor Recreation Plan (SCORP)** - A plan prepared by the Oregon State Parks and Recreation Department that describes and analyzes the organization and function of the state's outdoor recreation system, including an analysis of the roles and responsibilities of major outdoor recreation suppliers; an analysis of demand, supply, and needs; issue discussions; an action program to address the issues; and a project selection process.

**Stewardship** - Responsible care of land, water, other natural resources, or recreational resources.

**Stream class** - A stream classification system established in the Oregon Forest Practices Act. Class I streams are significant for: domestic use; angling; water dependent recreation; and spawning, rearing, or migration of anadromous or game fish. All other streams are Class II.

**Stream order** - A stream classification system based on hydrology with each small unbranched tributary being a first order stream, the joining of two first order streams making a second order stream, a third order stream has only first and second order tributaries, and so forth.

**Streamflow levels and instream water rights** - Minimum streamflows and instream water rights can be set to minimize the effects of pollution and for maintaining recreational uses. Minimum streamflows were set for the Rogue River, including the Hellgate Recreation Area, for recreation, fish, and wildlife.



**Threatened or endangered species** - Endangered species are defined as those likely to become extinct within all or a significant portion of their range. Threatened species are those likely to become endangered in the foreseeable future.

Federal listed terrestrial species that roost, forage, and nest in the vicinity of the Hellgate Recreation Area include the bald eagle, spotted owl, and peregrine falcon. Rogue River coho salmon are a State of Oregon sensitive species. The National Marine Fisheries Service is conducting status reviews of coastal coho salmon and coastal steelhead under the Endangered Species Act. Status reviews determine if listing is warranted.

**Threshold** - Factors that limit use over time or space, including ecological or resource, physical or space, facility, or social constraints—all of which can fluctuate as social and environmental factors change.

**Thrill power maneuvers** - Powerboat movements that are not necessary for navigation, but rather are conducted to enhance passenger experience.

**Thrill power maneuver areas** - Areas where thrill power maneuvers are identified as appropriate. These areas would be outside of erosion sensitive areas, mutual agreement areas for no wake, the sound management area, boat ramps, and designated swimming areas. Maneuvers would not be initiated by power boat operators within these areas when other watercraft users are present. Management could be through special BLM stipulations for commercial users and/or education for private users.

**Traditional uses** - Types of recreational activities occurring in 1968 when the National Wild and Scenic Rivers Act was passed.

**Travel corridor** - Route used by animals along a belt or band of suitable cover or habitat.

**Turbidity** - Quality or state of being turbid (muddy, cloudy, unclear) due to stirring or suspension of sediment or foreign particles.

**Unique ecosystems** - Ecosystems that have special habitat features, such as talus slopes, meadows, and wetlands.

**User fee** - An annual fee incurred by all visitors, both commercial and private, for the cost of managing the recreational river resources and providing facilities.

**Viability** - Ability of a wildlife or plant population to maintain a specific population for a specified length of time.

**Viable population** - A wildlife or plant population that contains an adequate number of reproductive individuals appropriately distributed to ensure the long-term existence of the species.

**Visitor services** - Methods of providing information to the public on outdoor recreation. Information would include where, what, who, when, how, and why to enjoy the outdoors. Services that have emphasis on protecting and maintaining resources, protecting visitors, promoting wise use, reducing conflicts between users or types of use, encouraging visitor cooperation and involvement in managing public lands, and increasing visitor understanding and support of multiple-use management.

**Visitor use day** - Use of all or part of a day by a visitor.



**Visitor use** - Number and type of visitors, both commercial and private, classified as activity and lodging types:

**Activity types** - Motorized tour boats, private floats, guided floats, private bank anglers, private boat anglers, guided anglers, day use, BLM and Josephine County campgrounds, lodging, and miscellaneous.

**Lodging types** - Hotel/motel, campsite, family/friends, and day-use only.

**Visitor use, primary season** - Time of year when most visitor days or watercraft days occur; May 1-September 30 in the Hellgate Recreation Area.

**Visitor use, secondary season** - Time of year outside of the primary visitor use season; October 1-April 30 in the Hellgate Recreation Area.

**Visual resources** - Landscape and vegetative features that, combined, form the characteristic "view" within an area.

**Visual resource management (VRM)** - Inventory and planning actions to identify visual values and to establish objectives and design management for protecting those values.

**Visual management classes** - Four categories (I, II, III and IV) assigned to public lands based on scenic quality, sensitivity level, and distance zones—each having an objective that prescribes the amount of modification allowed in the landscape.

**Watercraft day** - One watercraft used for all or part of a day by one or more persons.

**Water quality** - Chemical, physical, and biological characteristics of water with respect to its suitability for a particular use.

**Wetlands** - Areas inundated by surface water or ground water with a frequency sufficient to support vegetative or aquatic life that requires saturated or seasonally-saturated soil conditions for growth and reproduction. Wetlands generally include, but are not limited to, swamps, marshes, bogs, and similar areas.

**Wild river** - See Wild and Scenic Rivers System.

**Wildfire** - Any wild land fire not meeting management objectives and requiring a fire suppression response. Once declared a wildfire, the fire can no longer be considered a prescribed fire.

**Wild and Scenic Rivers System** - A national system of rivers or river segments designated by Congress and the President as part of the National Wild and Scenic Rivers System (Public Law 90-542, 1968) (see Goal). Each designated river is classified as one of the following:

**Recreational River** - A river or section of a river readily accessible by road or railroad, that may have some development along its shorelines, and that may have undergone some impoundment or diversion in the past.

**Scenic River** - A river or section of a river free of impoundments, with shorelines or watersheds still largely undeveloped but accessible in places by roads.

**Wild River** - A river or section of a river free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted.

**Withdrawal** - A designation that restricts or closes public lands from the operation of land and mineral disposal laws.



# Appendices

Federal Register 1972



Hog Creek Boat Ramp, 1990 - photo by Becky Brown



# Appendices

Activity types - Management, research, public, and private land projects, and other types of activities that are not directly related to the management of the land.

Lodging types - Hotels, motels, campgrounds, and other types of lodging.

Visitor use, primary season - Time of year when the land is open to the public for primary use, from May 1 to September 30 in the Hells Canyon Area.

Visitor use, secondary season - Time of year when the land is open to the public for secondary use, from October 1 to April 30 in the Hells Canyon Area.

Visual resources - Landscapes and vegetation features that are considered to be of scenic or historic interest.

Visual resource management plan (VRMP) - A plan that describes the management actions that will be taken to protect and enhance the visual resources of the land.

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Big Lost River, 1930 - photo by Becky Brown

as well as the surrounding area, and the river is a major feature of the landscape.

Wild River - A river that is free from dams and other man-made structures, and is characterized by its natural flow and the presence of rapids and falls.

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FRIDAY, JULY 7, 1972  
WASHINGTON, D.C.

# Appendix A Federal Register 1972

PART II

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## DEPARTMENT OF THE INTERIOR

Bureau of Land Management

### ROGUE NATIONAL WILD AND SCENIC RIVER, OREGON

Notice of revised development and  
management plans



# Appendix A Federal Register 1972



FRIDAY, JULY 7, 1972

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PART II



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## **DEPARTMENT OF THE INTERIOR**

**Bureau of Land Management**



### **ROGUE NATIONAL WILD AND SCENIC RIVER, OREGON**

**Notice of revised development and  
management plans**



# DEPARTMENT OF THE INTERIOR

## Bureau of Land Management ROGUE NATIONAL WILD AND SCENIC RIVER, OREG.

### Notice of Revised Development and Management Plans

The following is a proposed combined plan for development, operation and management of the Rogue National Wild and Scenic River administered by the Bureau of Land Management (BLM) and the U.S. Forest Service (FS) in accordance with Public Law 90-542. That portion of the Rogue River under the administration of the Bureau of Land Management extends from the mouth of the Applegate River downstream approximately 47 miles to the Siskiyou National Forest boundary near Marial. The Forest Service has administrative responsibilities for that portion of the Rogue River from the Siskiyou National Forest boundary downstream approximately 37 miles to the Lobster Creek Bridge.

This single plan revises and combines the BLM and the FS Master Plans for the Rogue River component of the National Wild and Scenic Rivers system published in the FEDERAL REGISTER October 24 and October 7, 1969, and as "House Document No. 91-175" and "House Document No. 91-170" respectively.

Although the original BLM and FS Master Plans were closely coordinated, there was some difference in language which caused public confusion. Therefore, the BLM and FS cooperatively developed this combined Rogue River Plan. This plan will guide both agencies in their development and management of the Rogue Wild and Scenic River.

The boundaries of the Rogue Wild and Scenic River and areas of responsibility for BLM and FS remain unaltered. Appendices and supplemental information remain unchanged. The only substantial revision pertains to expansion of existing lodges on the stretch of river classified as Wild River. Under the original BLM Master Plan, lodge expansion was permitted provided approval of construction and site plans was obtained from BLM. The original FS Plan did not allow expansion of lodges. The new combined plan prohibits lodge expansion.

The plan is available for public review and comment at the following BLM and FS offices:

Bureau of Land Management, Division of Recreation, Interior Building, Washington, D.C. 20240.

Forest Service, Division of Recreation, Agriculture Building, Washington, D.C. 20250.

Bureau of Land Management, Oregon State Office, 729 Northeast Oregon Street, Portland, OR 97208.

Forest Service, Pacific Northwest Region, 319 Southwest Pine Street, Portland, OR 97208.

Bureau of Land Management, Medford District Office, Federal Building—U.S. Courthouse, Medford, Oreg. 97501.

Forest Service, Forest Supervisor's Office, Siskiyou National Forest, Grants Pass, Oreg. 97526.

The plan shall take effect 90 days from the date of publication of this notice.

Sincerely yours,

BURTON W. SILCOCK,  
*Director,*  
*Bureau of Land Management.*

EDWARD P. CLIFF,  
*Chief, U.S. Forest Service.*

JUNE 28, 1972.

#### ROGUE RIVER PLAN

#### A COMPONENT OF THE NATIONAL WILD AND SCENIC RIVERS SYSTEM

Introduction .....	1
River Boundaries and Ownership.....	2
River Classification and Description:	
Entire River.....	3
Wild .....	4
Scenic .....	5
Recreational .....	5
Coordination with Other Agencies.....	9
Background Information:	
Physiography:	
General .....	11
Vegetation .....	12
Fish and Wildlife.....	12
Climate .....	13
River Flow.....	13
Water Quality.....	14
Cultural Factors:	
History .....	14
Transportation and Access.....	15
Population .....	15
Economy .....	16
River Uses:	
Boating .....	16
Fishing .....	17
Camping .....	17
Management Objectives.....	17
Management Direction.....	18
Soil and Watershed.....	19
Fish and Wildlife.....	20
Minerals .....	20
Protection .....	21
Recreation .....	21
Acquisition .....	24
Timber .....	25
Improvements .....	26
Transportation .....	29
Utilities .....	31
Visitor Information .....	32
Grazing .....	32
Bordering Lands.....	33
Appendix .....	
Recreation Development—Table 2.....	
Land Ownership and River Mileage— Table 2.....	
Maps .....	
Legal Description.....	
Wild and Scenic Rivers Act.....	

#### INTRODUCTION

Public Law 90-542, October 2, 1968, the "Wild and Scenic Rivers Act" hereinafter referred to as "The Act", designates certain selected rivers of the Nation possessing outstanding scenic recreational, natural, and other similar values and characteristics to be preserved and protected for the benefit and enjoyment of present and future generations.

The portion of the Rogue River designated as a component of the National Wild and Scenic Rivers System extends from the mouth of the Applegate River (about 6 miles downstream from Grants Pass) downstream to the Lobster Creek Bridge (about 11 miles upstream from its mouth), a total distance of 84 miles.

The river is to be administered by agencies of the Departments of the Interior and Agriculture as agreed upon by the Secretaries of

both Departments. The portion of the river from the mouth of the Applegate downstream to Marial, a distance of approximately 47 miles, will be administered by the Bureau of Land Management (BLM). The lower 37 miles are located within the boundaries of the Siskiyou National Forest and will be administered by the Forest Service of the U.S. Department of Agriculture (USFS). The term "The Agencies," as used hereafter, refers to the USFS and BLM, or to either one when used singularly.

Classification of this portion of river into the three classes presented in the Act has been proposed together with supporting management objectives and directives.

The Act charges that "Each component of the National Wild and Scenic Rivers System will be administered in such manner as to protect and enhance the values which caused it to be included in said system without, insofar as is consistent therewith, limiting other uses that do not substantially interfere with public use and enjoyment of these values. In such administration, primary emphasis shall be given to protecting its aesthetic, scenic, historic, archeologic, and scientific features. \* \* \*

Each agency charged with the administration of an initial component of the National Wild and Scenic Rivers System must, within 1 year of the date of the Act, establish detailed boundaries, classify the river or its various segments as wild, scenic, or recreational in nature, and prepare a river plan in accordance with the classification.

Development of a rationale for protecting and preserving the outstanding scenic, recreational, historic, cultural, and other values of the designated rivers and their immediate environments for the benefit of present and future generations is implicit within the Act. It is the objective of this river plan to present such a rationale.

Separate but coordinated river plans for the management of the Rogue River were prepared by the Forest Service and the Bureau of Land Management in September and October, 1969. In the development of these plans, public participation was obtained through and ad hoc steering committee, public meetings, and consultation with individuals and groups. Subsequent to the acceptance and publishing of the two river plans in the FEDERAL REGISTER, October 24, 1969, the decision was made by the agencies that the plans should be combined into one. Uniformity of administration and management could more easily be demonstrated if both agencies referred to one plan.

Emphasis is on the development of sound management objectives for the river and adjacent lands together with the necessary directions for reaching these objectives. In this sense, then, the river plan can be considered policy which establishes the framework to guide detailed implementation plans for recreation, wildlife, and fisheries habitat, timber management, etc. These detailed plans will be prepared with the respective resource staff specialists of the agencies as a part of the regular planning procedures. The implementation plans will be coordinated with those of the state and local agencies. The assistance and cooperation of private landowners will be encouraged.

Information concerning the river and detailed plans may be obtained by writing or visiting the BLM Oregon State Office in Portland, the Medford District Office, the USFS Region 6 Office in Portland, or the Siskiyou National Forest Office in Grants Pass.

#### RIVER BOUNDARIES AND OWNERSHIP

##### RIVER BOUNDARIES

Several factors influenced the location of the river boundaries. The Act limits the



area within the boundaries to not more than an average of 320 acres per mile. With a length of 84 river miles to be included within the boundaries, a maximum area of 26,880 acres is possible.

Of primary importance was the nature and condition of the land area seen from the river or river bank. Protection of this primary view area is one of the principal management objectives.

Boundaries are on legal subdivision and property lines where possible. On the basis of the above consideration, the river boundaries contained a total of 25,999 acres—an average of 310 acres per river mile.

#### OWNERSHIP

Refer to the Appendix for the legal description of lands within the boundary

#### RIVER CLASSIFICATION AND DESCRIPTION

##### ENTIRE RIVER

**Classification.** The Act provides three classifications which may be applied to a river or portion thereof which has been selected for inclusion in the National Wild and Scenic Rivers System. These are wild, scenic and recreational. A particular river may have one, two, or all three classes.

The Rogue River has five distinct areas. Three have been classified as recreational, one as scenic, and one as a wild river area.

**Description.** From its source in the high Cascade Mountains in southwestern Oregon near Crater Lake National Park, the Rogue, the third largest river in Oregon, tumbles and flows over 200 miles entering the Pacific Ocean.

The Rogue River Basin contains approximately 5,060 square miles of which 97 percent is in Oregon and 3 percent in California. Included within the basin is nearly all of Jackson and Josephine Counties, a large part of Curry County, lesser portions of Klamath and Douglas Counties, and a very small portion of Coos County, all in Oregon. It also includes very small segments of Siskiyou and Del Norte Counties in northwest California.

The River descends from the Applegate River to Lobster Creek in a series of steps. There is a difference of elevation of 834 feet in these 84 miles. Below Grave Creek, large rapids, submerged boulders, and shallow water tax the most skilled boatman. Rainie Falls, with a vertical drop of some 10 feet, is the only spot where it is necessary to portage or rope boats around the rapids. The steepest portion is in Howard Creek Chute and Mule Creek Canyon, with an average gradient of about 25 feet per mile. Below Agness to Lobster Creek the average gradient further flattens to about 5 feet per mile.

#### RIVER CLASSIFICATION AND DESCRIPTION

##### WILD

**Class definition.** A wild river area is free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and water unpolluted. It represents a vestige of primitive America.

Wild river areas may include an occasional inconspicuous road, airstrip, habitation, or other kind of improvement already established, provided the effects are limited to the immediate vicinity.

**Description.** The river classified as a wild river area extends from Grave Creek to Watson Creek, a distance of 33 miles.

This section of river flows through a natural-like environment with many areas of outstanding natural beauty. In Mule Creek Canyon, the river winds its way through a very tight channel bounded on both sides

by vertical rock faces rising 40–50 feet above the water. The water appears unsure of its course as it churns through the canyon which is less than 20 feet wide in places. An eerie, isolated feeling grips the traveler because the noise of the rushing water blots out all other sounds. The canyon walls in this area are so sheer that they can be seen unbroken from the water's edge to the ridge-top, a distance of 2,000 vertical feet at one point. Blossom Bar rapids and the Devil's Stairs rapids provide "picture-taking" scenery of white water conditions. Clay Hill still-water, above Flea Creek, is a welcome change of pace after leaving the exciting white water conditions of the narrow canyon. This area is more open with a mixture of boulders covered with light-green colored moss, grass covered slopes, small caves, and live oak trees.

Roads following the river above the mouth of Grave Creek leave the river at that point. Except for four primitive jeep roads and an unimproved road leading into Marial from the north, there is no vehicular access from Grave Creek to Watson Creek segment of the river. The wild river area is not without some man-made improvements. There is a small settlement at Marial. The Marial road extends to within several hundred feet of the high-water line, but is not visible from the river.

There is also a Forest Service station that houses a trail crew and a fire prevention guard. The Forest Service station is not visible from the river.

##### SCENIC

**Class definition.** A scenic river area is free of impoundments, with shoreline or watershed still largely primitive, and shoreline largely undeveloped but accessible in places by roads. Long stretches of conspicuous or well-traveled roads may not parallel the river in close proximity.

**Description.** One section of the river has been classified as a scenic river area. It extends from the creek in sec. 36, T. 35, S., R. 13, W., upstream to Blue Jay Creek in sec. 11, T. 35, S., R. 12, W., a distance of 7½ miles.

The river in this area is wider and quieter than is the wild river area. There are some small riffles, but generally the water is calm. Large gravel bars are present in much of the area. The adjacent land generally slopes away from the river at an angle that is not too steep. An exception to this is in Copper Canyon where the river narrows and the canyon walls rising abruptly from the river can be seen unbroken for about 800 vertical feet. Vegetation in the scenic river area is generally dense and extends essentially unbroken to the high water mark.

Only five structures can be seen from the river. In one place a power line crosses the river, but it is almost unnoticeable. There is road access to the river's edge in two locations: one is on private land and is not now used by the public; the other, at Tom East Creek, is so rough that it is even difficult for four-wheel-drive vehicle use. While there are a number of intrusions by man in this section, the shoreline is largely undeveloped, the river still offers high-quality natural scenery, and the character of the area remains essentially primitive.

##### RECREATIONAL

**Class definition.** A section of river which is readily accessible by road or railroad and may have some development along the shoreline. The river may have undergone some impoundments or diversions in the past.

It also possesses high potential for recreation development sites near the river as well as sites for launching and mooring boats.

**Description.** There are three separate sec-

tions of the river which have been classified as recreational river areas. They are (a) Hellgate, (b) Agness, and (c) Skookumhouse:

##### (a) Hellgate—

Hellgate Recreational River Area extends from the mouth of the Applegate River downstream 26.4 river miles to Grave Creek Bridge. It exhibits two distinctly different characters, with Hellgate Canyon as the division point.

In the upper portion, the river traverses a wide alluvial valley upon which may be seen evidence of previous meander courses. Primarily agricultural in nature, this section has a long history of farming and grazing.

A number of subdivisions occupy the river bank and overlooking hills. Proximity to the city of Grants Pass, coupled with the attraction of the river, has made residential use an ever increasing land use in this portion.

Below Hellgate, the river becomes confined in a canyon no longer subject to periodic changes in course. The few alluvial flats and bars have long been used and occupied. Some of these are undergoing subdivision to homesites or vacation retreats. Access is easy and convenient via a modern rural highway along the southwest shore.

There is a gradual downstream transition from a rural residential-agricultural character to a preview of the adjoining wild river area.

Intermittent stands of timber are seen along the shoreline and on the bluffs overlooking the upper river area.

The river becomes more entrenched with a corresponding increase in the amount of adjacent timber on nonagricultural land.

Within the Hellgate Recreation River Area man has exerted his influence on the land in many ways. Agriculture and mining have been practiced for over a century. Timber harvest and gravel removal have been undertaken in more recent times.

Recreational use centers on water-oriented activities, including fishing, boating, and swimming. Sightseeing, rockhounding, and camping are also popular.

At present, all facilities and developments for public recreational use are provided by Josephine County. There are 11 facilities in the area, ranging from simple boat ramps to a full complex at Indian Mary Park that includes sewer and water hookups for trailers.

Much of the land in this area is in private ownership.

##### (b) Agness—

The Agness Recreational River Area extends from the mouth of Watson Creek downstream to the mouth of Blue Jay Creek, a distance of about 10 miles. It connects with the Wild River Area on the upper end and the Scenic River Area on the downstream end.

The general character of this area is open canyon with sides neither very steep nor high. There are several places where the banks rise sharply and then level off to create a large flat bench. Most of these locations have been converted to pasture. Although there are still some places where the old-growth timber has not been harvested, most of it has been removed. The existing vegetative pattern is a combination of old-growth Douglas-fir, young second-growth Douglas-fir, hardwoods and grassy fields.

Conspicuous roads parallel the river closely through most of this area. Many of the cut and fill slopes have not yet revegetated and in some cases the fills extend down into the river. Two large concrete bridges, one across the Rogue River and one across the Illinois River, are visible from a large portion of this section.



Other man-made developments are readily evident in this area. They include utility lines that both parallel and cross the river, private homes, farms, trailer houses, and commercial structures. The small community of Agness is located in this area. While evidence of past mining activity can be found, there is none taking place now.

Occupancy uses include recreation residences, resorts in Agness and Illahe and a 45-unit campground near Illahe.

#### (c) Skookumhouse—

The Skookumhouse Recreational River Area extends from the Lobster Creek Bridge upstream to the creek in sec. 36, T. 35 S., R. 13, W. where it connects with the Scenic River Area. This is a distance of about 7 miles.

The general character of this river area is similar to the Agness Recreational River Area; that is, a canyon which allows the river to meander. The riverbed is quite broad here with gravel bars alternating from one side of the river to the other for its entire length. Although there are several flats along the river, there are only a few places where pasture has been developed. The banks are heavily forested with large old-growth Douglas-fir trees.

The Agness Road is conspicuous on the south side of the river for much of the length of this area. Many of the construction scars have still not revegetated and in some places the fill extends down into the river.

There are a small number of homes visible from the river and utility lines cross the river in a few places. Except for the Agness Road, man's impact is not heavily felt in this area.

Motorboating is popular because this section of river is easy to navigate. Almost all the boating originates outside of the area, however, because there are few suitable places to launch boats along this section of river. Commercial passenger jet boats pass through this area on their way upstream. It is necessary to deepen a channel through some of the gravel bars annually to permit passage of the large commercial boats. This is all done in gravel areas, so no permanent alteration to the riverbed occurs.

#### COORDINATION WITH OTHER AGENCIES

The following sections outline some of the administrative responsibilities of the State, other Federal and local governments.

##### STATE OF OREGON

The Oregon State Scenic Waterways Act, effective December 3, 1970, declared that portion of the Rogue River described in this master plan as a Scenic Waterway. Since the Rogue was an initial component of the National Wild and Scenic River and a State Scenic Waterway, the administering agencies will cooperate with the State Highway Commission, the State Engineer and the other State agencies concerned with the administration of the river area.

Legislative limitation has been placed on the construction of dams or structures on the Rogue River which would interfere with the free passage of fish. (O.R.S. 542.210)

Other legislation dealing with the Rogue River includes O.R.S. 536.300 which establishes a minimum flow of 735 c.f.s. at the mouth of the river. This was enacted for the express purpose of maintaining a minimum perennial stream flow to support aquatic life and minimize pollution.

To further protect the fisheries of the river, the State Legislature had previously established the Rogue River Coordination Board to provide a means for coordinating placer mining and fishing interests for the mutual benefit of both. The Board is composed of a fishing representative, a mining representative, and a neutral party.

Maintenance of water quality and implementation of water quality standards on the Rogue River is under the jurisdiction of the Oregon Department of Environmental Quality. Water quality and waste treatment standards for the river were adopted by that Department on July 24, 1969, and should be instrumental in restoring the river to an unpolluted condition.

The Oregon State Game Commission manages the fish and wildlife resources of the State. The Commission has developed a Master Plan for Angler Access and Associated Recreational Uses for the Rogue River Basin. Completed in 1967, it lists suggestions for future boat launching facilities, river access sites, and campgrounds. Twenty-three such sites are listed between Lobster Creek on the Lower Rogue and the mouth of the Applegate River on the Upper Rogue. Fifteen of these are in the part of the Rogue administered by the Bureau of Land Management. Several coincide with sites proposed for development by the Agencies and listed in the Appendix.

Jurisdiction for boating and boat use rests with the State Marine Board and Game Commission. Recent action includes designation of the upper 2½ miles of the Hellgate Recreational River area as a testing site for motorboats.

The State Board of Forestry administers State lands suitable for timber production. This includes two parcels within the River boundary.

##### CORPS OF ENGINEERS

The U.S. Army Corps of Engineers has investigated 36 reservoir sites in the Rogue River Basin. Of these, Lost Creek, Elk Creek, and Applegate were determined feasible and economically justified.

The Lost Creek site received construction authorization from the Flood Control Act of 1962 (87th Congress). It is located on the Rogue at river mile 158 (outside the river boundary) and has a planned capacity of 465,000 acre-feet.

Elk Creek and Applegate sites are on tributary streams of the Rogue River. Both sites were authorized for construction at the same time as Lost Creek and planning is well underway. Designed storage capacity would be 101,000 acre-feet and 72,000 acre-feet, respectively.

The three part program of the Corps of Engineers planned and justified a portion of the storage capacity on the basis of fishery protection and pollution abatement. Controlled release, from multilevel outlets, would assure minimum flows of 1,200 c.f.s. at Grants Pass. Gauging stations near Medford and Gold Beach would determine release requirements.

##### BUREAU OF RECLAMATION

Reclamation projects authorized in the basin include the Rogue River Basin Project-Talent Division and Agate Dam and Reservoir. The Talent Division has been constructed. Proposed projects include the Merlin Division authorized for construction by Public Law 91.270 and Illinois Valley Division.

The Bureau of Reclamation would also operate the irrigation features of the Corps of Engineers' Elk, Lost, and Applegate Reservoirs. Construction of these projects would irrigate most of the economically irrigable lands in the basin.

##### COUNTIES

The Board of County Commissioners and County Planning Commissions in Curry and Josephine Counties have made continuing contributions to development of this river plan.

The largest part of the BLM-administered section of the river lies within Josephine County, with a small stretch at the lower end within Curry County. All of the USFS portion of the river is in Curry County.

In April, 1971, the Josephine County Planning Commission adopted a comprehensive plan for Josephine County. The plan, required by law, is a blueprint for a zoning ordinance which is now in final form. Included within the ordinance is a Wild River Zone which follows closely the Oregon State Scenic Waterways boundary.

The Josephine County Parks Department has developed and operates a group of park facilities in the upper portion of the study area. Their 1967 Park and Recreation Plan outlines proposed additions to these facilities. Proposals for development of the Hellgate Recreational River Area contained in this plan are those portrayed in Josephine County's plan.

#### BACKGROUND INFORMATION

##### PHYSIOGRAPHY

*General.* The Rogue River is one of three which originate in the interior Cascade Range and flows westerly to the ocean. In places, the river churns through solid rock gorges with near-vertical walls. Flat or gentle topography is very limited. Small benches occur occasionally, but often there is a steep, high bank that separates them from the river. Much of the easily accessible land with gentle topography is in the form of river-level bars or islands and, in some parts of the river, even these are scarce and are subject to high water almost annually.

As it crosses the central portion of the basin, the Rogue River is a placid stream meandering through agricultural and rural residential developments. In this stretch, the observable landscape extends for several miles on each side of the river. Gravel bars and islands occur here and there.

Below Robertson Bridge, some 15 miles downstream from Grants Pass, the waterfront lands take on a canyon-like characteristic.

Natural features, including towering cliffs and large moss covered boulders, in some of the canyons and chutes are spellbinding. Outstanding in an area where each succeeding vista is noteworthy are sights in Hellgate Canyon, Howard Creek Chute, Kelsey Canyon, and Mule Creek Canyon. In the latter two areas, the river winds its way through narrow canyons which rise abruptly from the water.

*Vegetation.* Concentrated along the riverfront and adjacent slopes is perhaps the greatest cross section of the plant kingdom to be found on the Pacific coast. This region is the northern limit of the range of many species common to California and the southern limit of many northern species. Douglas-fir is the predominate conifer species, associated with ponderosa pine, sugar pine, white fir and incense cedar. Western red cedar, Port Orford cedar and Pacific yew, noble fir and Shasta red fir also occur. Botanical rarities such as Brewer spruce and Lawson cypress are found in widely scattered, isolated locations.

Important hardwoods include Oregon white oak, California black oak, Pacific madrone, Oregon ash, black cottonwood, red alder, golden chinquapin, tanoak, Oregon myrtle and big leaf maple.

Understory shrubs include rhododendron, azalea, blue blossom, salal, dogwood, vine maple, Oregon grape, various ferns, huckleberry, and salmon berry. Chaparral, including manzanita, ceonothus, poison oak, and canyon live oak and various grasses occurs on the hot, drier sites.



Vegetation along the river's edge ranges from moss, lichen, and grasses to wild flowers, shrubs, and trees.

**Fish and Wildlife.** Wildlife resources contribute greatly to the recreational values of the Rogue River. In addition to their harvest value, these animals are easily viewed in their natural habitat and have substantial aesthetic value.

The Rogue River Basin provides habitat for several large herds of black-tailed deer. These animals are commonly seen along the river. Deer harvest in the Rogue Basin averages 10,000 per year in approximately 100,000 hunter days use. Elk are seen occasionally along the river banks.

Large numbers of black bear live along the river and are occasionally seen during certain seasons. Bears are now protected from hunting in the area between Grave Creek and Lobster Creek.

It has been stated that the Rogue River is an anadromous fish highway. There is no time during the year when there are not mature fish in the river making their way upstream to spawn, or young fish working their way to the ocean to grow and mature. Anadromous fish include two races of steelhead, sea-run cutthroat, trout, chinook and coho salmon, two species of sturgeon and shad. Resident fish include four species of trout and six species of warm-water game fish.

Small animal species natural to the area include fur bearers and grey squirrels. Upland game species which may be observed along the river include Chinese pheasants, California and mountain quail, blue and ruffed grouse, band-tailed pigeons, and mourning doves. Hunting of these species within the river boundary is light.

Large numbers of American mergansers and lesser numbers of mallards and wood ducks nest along the river. Because the Rogue is not on a major migratory flyway, wintering use and harvest is light. Other bird species which inhabit the area are Kingfisher, Water Ouzel, the Great Blue Heron and numerous song-bird species.

Two birds listed as rare or endangered by the BSF&W in the publication *Endangered Plants and Animals of Oregon* Special Report No. 278, found along the Rogue are the osprey and the bald eagle. The rugged canyons of the lower Rogue provide the isolated nesting sites these species need.

**Climate.** The climate along the river is diversified. Near the coast, cool and humid weather prevails throughout the year. Farther upstream, the effects of the fog belt climate are less pronounced and the weather is often hot and dry during the summer. The average precipitation increases from about 90 inches at the mouth of the Rogue River to over 100 inches annually at Marial. About 80 percent of this precipitation occurs between October 15 and May 15.

Within the western section of the Rogue River Basin, average temperatures range from 32° to 75° Fahrenheit in the mountains and 40° to 67° along the coast. The range is broader within the central valley section where temperature averages range from winter lows of 32° to summer highs of 92° in the valleys, and 32° to 75° in the mountains.

**River Flow.** The Rogue River has an average annual discharge into the Pacific Ocean of 5,661,000 acre-feet.

Stream flow patterns are typified by moderate to heavy runoff in late winter and early spring with low flows during the summer and fall. Many of the small tributary streams become completely dry during the latter period.

Stream flow records have been maintained at Gold Ray Dam near Medford since 1905. Over that period, the average annual runoff has been 2,113,000 acre-feet. Maximum and

minimum annual runoffs have been 3,570,000 and 839,000 acre-feet, respectively.

Flooding has always been a problem within the Rogue River Basin. Observable channel change has been extensive over portions of the central valley section. Below Hellgate Canyon, channel change is minimal due to the gorge which confines the stream. Narrow benches and occupied flats are generally undated by each flood.

The largest flood of historical record occurred in 1861 and the second largest in 1890. The most recent large flood occurred in 1964.

**Water Quality.** Man has affected the quality of the Rogue River water. Analysis of river water near Grants Pass indicates that at certain periods during minimum flow, the bacteria count exceeds by as much as three times the allowable maximum for domestic consumption. Reports indicate a detergent foam problem in some isolated stretches of the river during late summer. Flushing effects by controlled release from proposed upstream impoundments during these times would be of benefit.

The recent adoption of Water Quality and Waste Treatment Standards for the Rogue River Basin by the Oregon Department of Environmental Quality will be beneficial to recreational use of the river. The new sewage treatment plants for the Medford and Grants Pass areas are scheduled for completion in 1971 and 1972, respectively. Both plants are designed to meet or exceed DEQ standards. When they are in operation, the water quality of the entire Wild and Scenic River should be within acceptable limits.

#### CULTURAL FACTORS

**History.** The Rogue River region has an exciting history. Explorations, fur trapping, settlement by immigrants, a gold rush, Indian wars, irrigation and lumbering have all helped shape the area into what it is today. Most of these activities have taken place within the past 125 years. Gold was discovered on the Rogue in 1849, and in the ensuing years every area along the river with gold in sufficient concentrations was mined. Most of the mining scars have now healed. Although mining activity on the river is at a standstill, the trails which the miners built provided access to the area and speeded its development. In 1931, Zane Gray patented a mining claim at Winkle Bar. One of his cabins still remains as a memento of his world, and the glory of the past.

**Transportation and access.** Access to the region is available by automobile, train, bus and air. Interstate Highway 5 parallels the river from the city of Gold Hill to Grants Pass. The Redwood Highway, U.S. 199, provides the major link between Grants Pass and the coastal areas. Highway 101, paralleling the Pacific Ocean, crosses the river at Gold Beach.

Access to the river within the boundaries of the Wild and Scenic River is via road systems which were constructed primarily to haul timber from the nearby forests. A low-standard, dead-end road reaches the river at Marial. A direct route between Grants Pass and Gold Beach has recently been constructed which parallels the river from Gold Beach to Agness and Hellgate to Galice. County roads parallel most of the Hellgate Recreational section. There is also a road reaching the river upstream from Agness through Powers from the north. The Wild section of the river from above Illahe to Grave Creek is roadless with the exception of the Marial Road. This roadless section is served by a foot trail.

The Bureau of Land Management maintains 24 miles of foot trail from Grave Creek to Marial. Closed to motorized vehicles, horses, and pack animals, this trail is well constructed, safe and has moderate grades

making hiking comparatively easy for all age groups.

The Forest Service maintains the Rogue River trail from Marial to Illahe. Between Illahe and the mouth of the river, hikers may follow roads and a section of the old trail not presently maintained. Thus, there exists a 68-mile reach of the river where it is possible to hike in conditions ranging from intensively developed to relatively primitive.

Drift boats have access to the entire area throughout the year, but motorized boats cannot go all the way upstream during periods of low flow.

**Population.** Population centers within the basin include Ashland, Medford, and Grants Pass, Ore. Gold Beach is at the mouth of the river.

Although data on where users come from is sketchy, surveys indicate that more than half of the recreationists visiting the river come from out of State.

As might be expected, California contributes the majority of out-of-State visitors. With the direct high-speed highways and freeways linking the major population centers with the Rogue River region, visitors 500 and more miles away can reach the area in a day.

An estimated 13 million people live within a 12-hour driving radius of the Rogue River (1970 census). Such population centers as Portland, Seattle, Sacramento, and San Francisco are included.

**Economy.** The present economy of the Rogue River Basin is dependent upon the use of its abundant natural resources. Timber, minerals, land, and water are the principal resources.

Timber operations are the major industry in the basin, with recreation and agriculture competing for second place. Initially, the economy of the basin was based upon gold mining. As mining activity declined, agriculture gained importance and was the most important activity until 1940 when the timber industry became the principal economic activity.

Today approximately 2,500,000 acres of land within the basin are timbered, with about 95 percent of this area capable of producing marketable timber.

In 1963, total recreation visits within the basin were estimated to be 1,725,000 with a total value of \$14 million. This rose to be an estimated 3,280,000 visits with an estimated value of \$27,800,000 in 1963. More recent figures have not been compiled but, because of the rapid growth of outdoor recreation, present expenditures undoubtedly exceed the above figures.

The major agricultural enterprises are located on irrigated lands in Jackson and Josephine Counties. Livestock, dairy products, poultry, fruit, specialty crops, field crops, and vegetable truck gardens are the principal products.

#### RIVER USES

**Boating.** The Rogue was first traveled downstream from Grants Pass to the ocean in 1915. The first trip upstream from the ocean to Grants Pass was made in 1947. Since that time, improvements in boats and motors have allowed use to increase to the point where future regulations of boat use can now be foreseen.

There are three main types of boat use on the river. The unique jet boats that make daily trips from the coast to Agness or Paradise Bar and back carry about 40,000 people annually. An additional 10,000 people annually enjoy a jet boat trip from Grants Pass to Hellgate and return.

Commercially guided float trips beginning in the Grants Pass area carry an additional 2,000 persons. White-water boating, the ulti-



mate experience for many river users, is available in a 55-mile stretch from Finley Bend to Agness. There is a new challenge around every bend in this stretch. Float trips in rubber rafts or kayaks are fast becoming popular.

An unknown, but substantial, number of people use private boats for fishing, sightseeing, or just pleasure boating. There are several boat-launching sites available to the public.

Below Paradise Bar, the commercial operators transport people and supplies upstream from Gold Beach with power boats. This practice is established and is publicly accepted in this locale. Another source of power boat use in this section of the river is sport fishing, both with and without guides.

**Fishing.** The Rogue River is internationally renowned for its outstanding salmon and steelhead trout fisheries. It is a "big fish" river which produces salmon upward of 40 pounds and steelhead exceeding 15 pounds. In excess of 100,000 salmon and steelhead spawn in the Rogue River Basin annually. The character of the Rogue River, its setting and the characteristic of the anadromous salmon and steelhead provide the fisherman with a diverse fishing opportunity. Anglers use bait, hardware, or flies and fish from the shore or by wading, trolling, or floating.

**Camping.** Camping and picnicking facilities are located at numerous sites along the river. Most are located between Grants Pass and Marial. Of those, 14 are maintained and operated by the Josephine County Park Department and seven are operated by the BLM in conjunction with the hiking trail. The Forest Service maintains two campgrounds on the lower stretch of the river. All sites are also shown in the Appendix, Tables 1 and 2.

Presently, the wild river area gets two types of camping pressure—hikers and raft or inflatable boat floaters. The hikers usually travel in small groups and need only a limited space and drinking water to make camp. The floaters, however, travel in groups of 50 people or more at a time and need a much larger site.

There are several private lodges between Grants Pass and Gold Beach. Most of these operate wholly to meet the necessities of downriver, guided float trips originating in the Grants Pass area.

#### MANAGEMENT OBJECTIVES

##### ENTIRE RIVER

Each component of the National Wild and Scenic Rivers System shall be administered in such manner as to protect and enhance the values which caused it to be included in said System without, insofar as is consistent therewith, limiting other uses that do not substantially interfere with public use and enjoyment of these values. In such administration, primary emphasis shall be given to protecting its aesthetic, scenic, historic, archeologic, and scientific features. Other resources may be utilized and other activities permitted to the extent that they do not have a direct and adverse effect on the wildlife habitat, river fishery, scenic attractions or recreational value. Management plans for any such component may establish varying degrees of intensity for its protection and development based on the special attributes of the area.

Special efforts will be made to (1) maintain or improve the quality of water which empties in the river, (2) improve the fish and wildlife habitat, and (3) maintain its free-flowing condition.

##### WILD AREA

The wild area will be managed to (1) provide river-oriented recreation opportunities in a primitive setting, and (2) preserve the

river and its immediate environment in a natural, wild, and primitive condition essentially unaltered by the effects of man.

##### SCENIC AREA

The scenic river area will be managed to (1) maintain or enhance the condition of the high-quality scenery and the largely undeveloped character of the shoreline, (2) provide opportunities for river-oriented recreation which is consistent with its largely undeveloped nature, and (3) utilize other resources and permit other activities which maintain or enhance the quality of the wildlife habitat, river fishery, scenic attraction or recreational values.

##### RECREATIONAL AREA

The recreational river area will be managed to provide or restore a wide range of public outdoor recreation opportunities and water-oriented recreational facilities.

##### MANAGEMENT DIRECTION

Management direction statements explain how the management objectives for the river will be met. The directions for each subject begin with statements of a general nature and apply to the entire river. Additional or modifying directions specific to an individual river area are contained in that portion of the statement specifically identified by a river area designation.

To understand the total impact of the directions under which an individual river area will be managed, both the general and specific statements must be considered.

Unless otherwise specified, the management directions apply to both private and Federal lands.

Other legislation, regulations, plans, recommendations, and policies have been developed regarding the Rogue River and its bordering lands. The agencies will cooperate and coordinate with other Federal, State and local governments in appropriate activities and programs within the river boundaries.

##### SOIL AND WATERSHED

**Entire area.** Water and soil are the two basic elements which make a river and its banks. The condition of both is important in that they effect all the other uses and activities in the area.

The following management direction is aimed at maintaining or improving the condition of the soil, water, and watershed.

Make soil studies to guide planning and location of future improvements, operations, and developments.

Scenic easements on critical soil areas of privately-owned lands will be acquired to protect those areas exhibiting clear and present potential for deterioration if disturbed or where serious deterioration is presently occurring.

Stabilize or revegetate all areas of exposed soils caused naturally or by man's activities. Place special emphasis on preventing and controlling soil erosion near the water's edge.

Alteration of the stream bed will be limited to that necessary to maintain current levels of navigability. Permission must be obtained from the agency having jurisdiction before alteration is allowed. Modification of bedrock will not be permitted.

Allow no surface dumping of garbage or other potential pollutants. Waste material must be disposed of in a manner that does not contaminate ground or surface water.

Sewage disposal systems must meet or exceed the State and county sanitation requirements.

Cooperate with the Oregon State Department of Environmental Quality to achieve compliance with the Rogue River Water Quality and Waste Treatment standards.

Coordinate with the Army Corps of Engineers concerning releases from upstream

reservoir facilities to benefit fishery resources and recreational use.

##### FISH AND WILDLIFE

**Entire area.** Prepare habitat management plans for fish and wildlife:

(1) Provide management guidelines that emphasize protection of species considered to be rare or endangered.

(2) Direct management toward providing the maximum number of wildlife sightings along the river and trail consistent with good management practices.

Manage other resources along the river so that the fishery is enhanced, not diminished by siltation or an increase in water temperature.

Cooperate with Oregon State Game Commission in all matters relating to fish and wildlife management.

##### MINERALS

**Entire area.** Subject to future regulations, all prospecting, mining operation, or other activity relating to mineral exploration or production on valid mining claims will be administered under the criteria established by the Wild and Scenic Rivers Act.

Determine the validity of all mining claims. Access routes to mining claims will be judged on the basis of minimum adverse affect on values of the river area.

Mining or associated operations contributing amounts of noise, smoke, dust, or other elements detrimental to the river environment may be required to limit operations during peak recreation use periods each year.

Removal of mineral materials known as "common varieties" for commercial purposes from the riverbed or adjacent bars will not be allowed subject to valid existing rights. Before any gravel is disturbed, precautions must be taken to eliminate siltation or maintain siltation at an acceptable level and approval obtained from the Oregon State Game Commission in cooperation with other State and Federal agencies.

Where existing material removal operations are adversely affecting recreational values on the river, purchase of the mining rights on these sites will be sought as rapidly as possible. Early acquisition of scenic easements on remaining undeveloped deposits will also be pursued.

The agencies will cooperate with the Oregon State Land Board in meeting the objectives of the Act, where State-owned lands are involved.

The agencies will cooperate with the Oregon State Department of Environmental Quality to control water pollution caused by mining activities, including those beyond the river boundaries.

##### PROTECTION

**Entire area.** Due to the roadless character along segments of the river and the need to maintain this character, special protection requirements are established. The unique and irreplaceable values involved demand the employment of all necessary means to insure prompt control of wild fires. Criteria for protection are as follows:

Plans will be developed for prevention, detection, and suppression of wild fire and disease or insect infestations. These plans should emphasize:

(a) Speed in which the above factors can be accomplished.

(b) Methods of accomplishing the above factors which would create the least amount of impact to the environment.

Take restoration action to reduce the impact and return the damaged area to its original condition.



Cooperate with other governmental and private organizations in planning and implementing the protection program.

#### RECREATION

**Entire area.** One of the key reasons for including the Rogue River in the National Wild and Scenic Rivers System was to protect and enhance the recreational values which the river possesses. These values are realized in a great variety of activities. They range from an individual pitting only his knowledge and skill against the sometimes hostile forces of nature to recreation uses where the facilities and equipment are so sophisticated that the river can be enjoyed with no special knowledge or skill.

Consistent with the objectives of the individual river areas, sufficient recreation facilities, on both private and Federal land, will be developed to meet the needs of the recreationists. Care will be taken that use levels do not reach the point where the quality of recreation experience or quality of the stream environment deteriorates. Recreationists using the river in groups of larger than 10 people may be required to camp in developed camping sites.

Since boating, fishing, and sightseeing are the main recreational uses on the river, top priority for recreation development will be given to improving the quality of these activities.

A recreation plan will be prepared for the river area. The plan will make a detailed analysis of future recreation needs within the framework of the policies and objectives outlined in this plan. It will be closely coordinated with, and incorporate the plans and proposals of, other governmental agencies and private individuals insofar as they are compatible with the purposes of the Act. The plan will include recommendations concerning the relative roles each might play in meeting the needs of recreationists using the river. It will delineate activity management zones which will be managed under the constraints presented in this plan. As necessary, it will provide the basis for long range development proposals.

Although current levels of all types of boating activity create few problems, uncontrolled future use would probably result in safety hazards and a lowering of the quality of the recreation experience. When the need warrants, this will be prevented by the establishment of regulations limiting size, number, type, speed, etc., to provide optimum boat use. These regulations will be developed in cooperation with the State and other agencies.

Future technological advances may result in new types of equipment that could be used on the river. Only such new types of equipment compatible with management objectives will be permitted.

**Wild area.** Recreation developments will be of a primitive nature and will include only those facilities necessary for sanitation, safety, fire, and site protection and administrative purposes. Recreation use of the Wild River Area will require a maximum degree of outdoor skills. The absence of man-made developments and the unmodified natural environment will dominate.

Boating regulations to achieve the Wild River objectives will be encouraged. The regulations should:

(1) Favor nonmotorized use. Motorboat use from Watson Creek to Blossom Bar will be held to the use level consistent with that of 1968, the year of the Wild and Scenic River Act.

(2) Allow no regularly scheduled commercial motorized boat trips upstream from the Blossom Bar Rapids.

Recreationists using the area at any given time will be limited to levels consistent with

the Wild River management objectives. No more facilities than are necessary to meet these levels will be provided.

**Scenic area.** Proposed recreation facilities will be for the use of boaters and hikers since there are no roads in this area. Facilities may offer more convenience and comfort than those in the Wild River Area; however, the natural environment will still dominate. Development will not intrude upon the natural scenic quality that presently exists.

The maximum size of boats using this area of the river will be limited to the 49-passenger jet boat currently approved by the Coast Guard.

**Recreational area.** Recreation facilities may be developed to provide a wide range of opportunities for river-oriented recreation consistent with management objectives and protection of the river environment.

Private enterprise will be encouraged to develop recreational facilities on lands outside the river boundaries.

Boat size in the Agness and Skookumhouse areas will be limited to the 49-passenger jet boat. The 49-passenger boat will not be permitted above Snout Creek.

No action to regulate boat use will be initiated unless public safety or the recreation experience is threatened. Launching and mooring facilities may be provided within this area.

Agness is the logical place to develop a center for services and supplies for both local residents and the river-using public. Therefore, it will be necessary to allow a greater variety of uses and a higher density of development in Agness and the immediate vicinity than any other place on the river. This must be done in a way which conforms with the purpose and intent of the Act.

#### ACQUISITION

**Entire area.** On land that remains in private ownership, compliance with the management directions will be accomplished through acquisition of scenic easements. As used herein, the term scenic easement means purchase of the right to control the use of land (including the air space above such land) for the purpose of protecting the scenic view from the river. Such control shall not affect, without the owner's consent, any regular use exercised prior to the acquisition of the easement.

Scenic easements will be sought to protect the natural environment or setting. Easements will consider protection of the view from the river or its environs as well as protection of critical resources.

Scenic easements will be written so that improvement or alteration of the property or change in land use that may impair the scenic quality or basic resource will require review and approval by the agency having jurisdiction before such activity may begin. Conforming and nonconforming uses of land are covered in this plan in a general way. Specific application of these guides will necessarily be determined on the grounds of a case-by-case basis. An acquisition plan showing justification, needs and purpose of scenic easements will be developed to guide the acquisition program.

Where a scenic easement for a parcel of private land is needed, an attempt will be made to negotiate an easement for all the parcel within the river boundary.

Acquisition of fee title will be considered on any parcel of land that becomes available if it is in the public interest to do so.

Where there is a need and the terrain is suitable, an easement for public access along the banks of the river will be acquired.

**Wild and scenic areas.** Fee title will be acquired when there is a need for public development or to convert an incompatible use or it is in the public interest to do so.

#### ACQUISITION

**Recreational area.** Fee acquisition will not be considered essential, but may be desirable in some instances.

Scenic easements will recognize the existence of more man-made modifications. Easements will be sought if there is a need to control uses that conflict with the basic resource.

In the Agness area, coordination will be sought with Curry County in the development of a plan and zoning ordinance to cover private land within the boundaries.

At such time a zoning ordinance that meets the provisions of the Act is adopted by Curry County, the ordinance will become a part of this plan and will be substituted for all provisions covering private land inside the boundaries in the Agness area. The Forest Service would retain the right to approve any variance or any amendment to the zoning ordinance before it could become effective.

Until the zoning ordinance is adopted, the area within and adjacent to the community of Agness will be administered under the management directions for the rest of the recreational river area.

If Curry County does not adopt a satisfactory zoning ordinance, the Forest Service will prepare a plan and management direction for the private land inside the river boundaries for this area. This plan would be the basis for the development of the Agness area to meet the objectives stated above.

#### TIMBER

**Entire area.** The most important value of the timber within the boundaries is in the makeup of the landscape. Timber management, therefore, will be directed toward maintaining or restoring an aesthetically pleasing timber stand.

Removal of timber is not precluded within the boundaries. When timber is to be removed, it will be done in a manner which has the least possible adverse effect on the landscape. Some cutting will be necessary in construction of approved improvements and recreation facilities or to remove hazards. Selective cutting may be allowed in some instances if the operation, including roads, is not visible from the river. There are few areas within the boundaries where this is feasible.

Timber may be removed in cases of a natural catastrophe, such as fire or windthrow with its resultant buildup of insects or natural occurrences of insects or diseases which could become epidemics. If failure to remove affected trees creates an unacceptable fire hazard or threatens to destroy large numbers of trees within the river area or adjacent land, a thorough study will be made to determine the impact of leaving the trees or removing them. The decision on whether to remove the timber will be made after considering all factors and will be based on what will be least destructive to the river area values.

Protection of timber visible from the river or its environs within the river boundaries will be accomplished through scenic easement purchase of the timber on privately-owned lands, or on nonprivate lands through cooperative agreements. Such easements and agreements will not necessarily preclude all cutting of timber but will require prior approval of the agency having jurisdiction. This will be stipulated in the easements and agreements. Each situation will require individual analysis and judgment.

**Wild area.** Timber cutting will not be allowed within this area except that which is incidental to construction or maintenance of improvements, to eliminate hazards, or in case of a natural catastrophe.

**Scenic area.** Generally, there will be no timber harvest within this area that is noticeable from the river or its environs. Where the effects of timber harvest are not notice-



able from the river, trails, roads, or recreation sites, timber killed by fire, windthrow, insects, disease, etc., may be removed.

**Recreational area.** Selective harvest of timber stands within the boundaries may be permitted provided the effects are not apparent to users of the river and the cutting does not affect recreational or aesthetic qualities.

#### IMPROVEMENTS

**Entire area.** There are places along the river where new developments or resource improvements may be desirable to meet public needs.

Structures that can be seen from the river, trail, or developed recreation sites will (1) be of an attractive design, (2) have sufficient topography or vegetative screening to make them as inconspicuous as possible, (3) be designed so that little or no soil is left exposed when construction is complete, and (4) contain no direct or indirect design features which are obtrusive or incompatible with the scenic qualities of the area. (A direct design feature is one which is a physical part of the development. Examples of incompatible direct design features are shiny metal siding or roofing, large areas of bright colors, large or lighted signs, etc. An indirect design feature is one resulting from the development. Examples of incompatible indirect design features are noise, smoke, odor, etc.) Structures that cannot be seen from the river will contain no indirect design features obtrusive or incompatible with the scenic qualities of the area and will be designed so that little or no soil is left exposed when construction is complete.

Improvements on private land will be controlled through purchase of scenic easements. Additional recreation residences will not be permitted on public lands.

No new developments except trails, boat ramps, and mooring facilities, including service roads, will be allowed below the high-water line of December 1964, except where the land was covered with slack water and is not visible from the river.

No signs will be erected without written approval of the agency having jurisdiction.

**Wild area.** In order to keep the river and adjacent lands in an essentially primitive condition, no new structures, except those needed for public recreation or for resource protection, and no new lodges or expansion of existing lodges or commercial public service facilities will be permitted. Any improvements permitted must meet the following criteria:

(1) Public Recreation Developments and Resource Improvements: Design and locate improvements so they are as inconspicuous as possible and in harmony with the environment.

(2) Public Information and Orientation: Assure that signs are rustic, minimum in size and number, and not visible from the river.

Owners of existing structures will be encouraged to maintain them in a condition compatible with the primitive character of the area. Repair or replacement of an existing building will be allowed providing the building remains relatively the same in appearance or is an improvement in making the structure inconspicuous or in harmony with the environment.

New boat docks, moorings, or salmon boards will not be permitted.

Summer home permits in the Marial area will not be renewed and will expire in 1979.

**Scenic area.** Commercial public service facilities will not be permitted in this area. Residential structures will be permitted providing the stipulations in the entire river section (improvements) are met.

Development will be allowed only where new structures cannot readily be seen from the river.

Single-family structures that are visible and meet the requirements stated under the entire river (improvements) will be limited to a total of two structures on each side of the river in any 1 mile of river frontage. One structure will be allowed on the minimum lot size of 5 acres. A minimum side dimension of 200 feet will be allowed per lot. Developments will be approved on a first-come-first-serve basis. Existing developments will be included in the quota.

No structure shall exceed 30 feet in height from natural grade on the side facing the river.

**Recreational area.** Structures permitted within the recreational area of the river, provided they are in harmony with their surroundings, are: residential buildings, farmsteads and appurtenant facilities, and lodges or public recreation facilities needed to serve the river user.

There may be instances where it is necessary to locate commercial public service facilities such as gasoline stations, roadside restaurants, and motels within the recreational river boundaries. With the exception of boat-servicing marina operations, developments adjacent to the river will be discouraged. Where other developments are necessary within the boundaries, they will be designed and placed so as to be as unobtrusive as possible. Vegetative screening and topography will be used to keep them from direct view of the river.

Developments will be limited so that no more than four structures on each side of the river will be readily visible in any 1 mile of river frontage, with no structure of one development closer than 200 feet to a structure of another development. Where developments cannot be seen from the river, they will be allowed on the basis of a minimum lot size of 1 acre each, provided sewage disposal can be adequately accomplished. Lots will have a minimum side dimension of 100 feet. Within these limitations, cluster-type developments may be permitted. Existing developments are part of the quota.

On lots of less than 1 acre which existed prior to October 2, 1968, the owner may construct a single-family dwelling on the same basis as if the lot was 1 acre or more.

Other structures will be permitted where necessary for the administration of the river or essential to accomplish other activities allowed in this area.

Construction and placement of salmon boards on private lands where they have not been used before will be regulated through scenic easement purchase. To be permitted, they must be of attractive design and must not obstruct navigation. They should not become so numerous as to affect other recreational uses of the river. Their use on public lands may be allowed under permit from the administering agency. They will be removed each year by June 15 and stored out of sight.

#### TRANSPORTATION

**Entire area.** Existing roads and bridges affect the quality of the landscape along the river.

Great care will be taken in the location and design of any future roads to assure they are not visible in a way that would detract from the river environment.

Construction of roads, trails, or tramways will be controlled on private land through scenic easements. Approval of construction will be determined on a case-by-case basis.

No additional airstrips or railroads will be permitted.

Helispots may be located only in locations out of view of the river, trail, or recreation sites and where they do not adversely affect the recreation experience.

There will be no additional bridges or cable crossings across the Rogue River with the

possible exception of a foot bridge or ferry at Agness.

Public use of the trail system, existing and proposed, will be restricted to hikers only.

Roads and trails will be constructed to the minimum safe standard consistent with the intended use. Public roads will be treated to eliminate dust when deemed necessary by the administering agency.

Transportation plans will be reviewed and updated periodically to reflect the management objectives for the Wild and Scenic River.

**Wild area.** Except in the event of a natural catastrophe in which the decision may be made that roads are necessary, there will be no construction of new roads. If roads must be built, they will be closed and obliterated as soon as the need is past.

The road at Marial will not be improved to more than the minimum safe single-lane standard for the types and levels of traffic which it currently receives. It will not be extended past its present location. No additional trailhead capacity will be provided.

Relocating the Rogue River Trail from approximately Dans Creek to the downstream boundary of the Wild Area should be considered in the transportation plan.

A proposal shall be considered to replace foot bridges washed out on five tributary streams during the 1964 flood.

Heliports and helispots will be established only as needed for emergency administration.

Termination of the use of existing airstrips will be encouraged.

**Scenic area.** There will be no construction of new roads except as needed for temporary access for fire control purposes or removal of trees killed by fire, windthrow, insects, and disease, as specified under Timber.

The existing Tom East Creek Road will be obliterated.

The existing trail will be reconstructed or relocated as needed to provide a trail the length of the Scenic River Area. This trail shall connect with the existing trail at both ends. Location of the trail within the Scenic Area will be aimed at providing the user a wide variety of experience and to take advantage of scenic view points.

Helispots will be allowed as needed for administration.

**Recreational area.** New roads needed for developments will be permitted providing the design, location and standards are such that the least impact on the environment is assured. Additional through roads paralleling the river will not be permitted.

USFS will not extend the road on the north side of the river past the west boundary of sec. 35, T. 35 S., R. 13 W., Willamette Meridian.

The Rogue River Trail downstream from the Wild River Area shall be reconstructed or relocated as necessary.

Parking areas will be located out of sight of the river or recreation sites. Screening will be provided if necessary. If there is any other suitable nearby place to park, parking will not be permitted on the gravel bars in view of the river. Where there is no suitable alternative, vehicles will be parked where they are least conspicuous.

#### UTILITIES

**Entire area.** With a few exceptions along the recreational river areas, existing utility development along the river has had little adverse affect on recreational and scenic values. However, construction of additional developments and expansion of existing ones will increase the need for additional utilities. Construction of new utilities will be done in such a way that the scenic and recreational values are not degraded.

Try to locate all new utility lines out of view of the river or its environs. Where this



is not possible, the visual impact will be reduced by use of screening, color, non-reflective hardware and conductors and treatment of the new utility corridor. Reduction of visual impact of existing lines should be encouraged.

Where feasible, utility lines will be buried.

Power-generating equipment will be located and designed so that it cannot be seen or heard from the river.

If possible, existing and proposed utility lines will be grouped so the number of right-of-way corridors and aerial crossings of the river are reduced. The possibility of attaching new utility lines to bridges should be investigated.

Where necessary for protection of the scenic quality of the river front, scenic easement purchase of the right to construct utilities visible or audible from the river will be undertaken. This includes power generating equipment.

*Wild area.* No additional above-ground utility lines will be permitted.

*Scenic area.* No utilities that can be seen from the river or its environs will be allowed.

#### VISITOR INFORMATION

*Entire area.* The Rogue River is rich in history and natural features. There is a tremendous opportunity to identify these features and interpret them for the education and enjoyment of the public.

To accomplish this, a study will be undertaken to identify and interpret significant features along the river. This study will form the basis of an effective program of information and interpretation for recreation users of the river. Manned visitor information stations will be needed in the Hellgate Recreation area and at the confluence of the Illinois and Rogue River.

#### GRAZING

*Entire area.* Presently, there is very little grazing land within the river boundaries. Private land now in pasture is compatible with the scenic qualities of the river and may continue to be used for that purpose.

#### BORDERING LANDS

The area within view of the river extends beyond the river boundaries in many places. Preservation of the scenery within this area is an established management objective. The administering agencies will manage the resources to protect the aesthetic and recreational qualities of the area visible from the river or trail. There will be intensive coordination and analysis of resources before any activity is authorized within the bordering lands.

Although timber cutting is restricted, it is allowed if done in accordance with the management objective and does not pollute the Rogue or its tributaries.

#### APPENDIX B

##### LANDS INCLUDED WITHIN RECREATIONAL RIVER BOUNDARIES

###### Willamette Meridian

- T. 34 S., R. 7 W.,  
 Sec. 6, lots 4, 5, 6, and 7;  
 Sec. 18, lot 4, SW $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ ;  
 Sec. 19, lots 1, 2, 3, and 4, W $\frac{1}{2}$ E $\frac{1}{2}$ NW $\frac{1}{4}$ ;  
 Sec. 30, lot 1 including a portion of M. S. No. 734, Robert Dean Placer Claim;  
 Sec. 31, lot 4, SE $\frac{1}{4}$ SW $\frac{1}{4}$ , W $\frac{1}{2}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ .  
 T. 34 S., R. 8 W.,  
 Sec. 1, lots 8, 9, 10, 11, 12, and 13, SE $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ , SE $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ ;  
 Sec. 11, SE $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ ;  
 Sec. 12, lots 1, 2, 3, 4, 5, 6, 7, and 8, NW $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ , SE $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$ , E $\frac{1}{2}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ , NW $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ ;

- Sec. 13, lots 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, and 13, NE $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ , M. S. No. 796 Grubstake, portions of M. S. No. 389 Holy Terror, M. S. No. 433 Goss, M. S. No. 511 Mattison Placer;  
 Sec. 14, E $\frac{1}{2}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ ;  
 Sec. 24, lots 1, 3, 4, 5, and 8, portions of M. S. No. 511 Mattison Placer, portion of M. S. No. 389 Holy Terror, portions of M. S. No. 433 Goss, M. S. No. 404 El Rio Ore and Magnolia;  
 Sec. 25, lots 1, 2, 3, 6, 8, and 9, SE $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ , SE $\frac{1}{4}$ SW $\frac{1}{4}$ , portion of M. S. No. 734 Robert Dean Placer claim;  
 Sec. 36, lots 1, 2, 6, 7, 8, 10, 11, 12, 13, and 14, NE $\frac{1}{4}$ NE $\frac{1}{4}$ , W $\frac{1}{2}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ , E $\frac{1}{2}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ , W $\frac{1}{2}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ , E $\frac{1}{2}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ , portion of M. S. No. 865 Genevieve Placer.

###### T. 35 S., R. 7 W.,

- Sec. 3, S $\frac{1}{2}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ ;  
 Sec. 4, lots 5, 6, 7, 8, 9, 10, and 11, S $\frac{1}{2}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ ;  
 Sec. 5, lots 5, 6, 7, 8, 9, 10, 11, 12, and 13, SW $\frac{1}{4}$ NW $\frac{1}{4}$ , NE $\frac{1}{4}$ SW $\frac{1}{4}$ ;  
 Sec. 6, lots 1, 2, 3, 4, 5, 6, 9, 10, 11, 12, and 13, SE $\frac{1}{4}$ NW $\frac{1}{4}$ ;  
 Sec. 7, that portion of the NE $\frac{1}{4}$ NE $\frac{1}{4}$  lying north and east of the Merlin-Galice Road.  
 Sec. 8, NW $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$ , N $\frac{1}{2}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ , NW $\frac{1}{4}$ NW $\frac{1}{4}$ ;  
 Sec. 9, lots 1 and 2, N $\frac{1}{2}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$ ;  
 Sec. 10, lots 1, 4, 5, 6, 7, and 8, all those portions of land in lots 2, 3, and the SE $\frac{1}{4}$ NE $\frac{1}{4}$  lying south and west of the Merlin-Galice Road, N $\frac{1}{2}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$ , SE $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$ , NE $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ , E $\frac{1}{2}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ , NE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ , N $\frac{1}{2}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ , SE $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ ;  
 Sec. 11, lots 2 and 3, that portion of lot 1 lying south and west of the Merlin-Galice Road, that portion of the SE $\frac{1}{4}$ SW $\frac{1}{4}$  lying west of the Merlin-Galice Road;  
 Sec. 14, lots 1, 2, 3, 4, 5, 6, 7, and 8, NE $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ , SE $\frac{1}{4}$ SW $\frac{1}{4}$ , SW $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$ , W $\frac{1}{2}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ , that portion of the NW $\frac{1}{4}$ NE $\frac{1}{4}$  and the NE $\frac{1}{4}$ NW $\frac{1}{4}$  lying south and west of the Merlin-Galice Road;  
 Sec. 15, NE $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ ;  
 Sec. 23, lots 1, 2, 3, 4, 6, and 7, that portion of lot 5 lying north and east of Paradise Gardens Road, W $\frac{1}{2}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ , E $\frac{1}{2}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ , E $\frac{1}{2}$ W $\frac{1}{2}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ , N $\frac{1}{2}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ , that portion of the SE $\frac{1}{4}$ NW $\frac{1}{4}$  lying north of Paradise Gardens Road and east of the Pickett Creek Road;  
 Sec. 24, lots 1, 2, and 3, S $\frac{1}{2}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$ , NE $\frac{1}{4}$ SW $\frac{1}{4}$ ;  
 Sec. 25, lots 1, 2, 3, and 4, N $\frac{1}{2}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ , SW $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ , that portion of lot 5 and DLC No. 37 lying south of the Lower River Road;  
 Sec. 26, lots 1, 2, 3, 5, and 6, that portion of lot 4 lying east of the Riverbank Market Road and the Pickett Creek Road, E $\frac{1}{2}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ ;  
 Sec. 35, lots 1, 2, 3, 4, 5, 9, those portions of lots 6, 7, 8, SE $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$ , S $\frac{1}{2}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ , lying south and east of the Riverbank Market Road, an island lying in portions of the S $\frac{1}{2}$ NE $\frac{1}{4}$  and the N $\frac{1}{2}$ SE $\frac{1}{4}$ , N $\frac{1}{2}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ ;  
 Sec. 36, lots 1 and 2, those portions of DLC No. 37 and DLC No. 38 lying west of the Lower River Road.  
 T. 35 S., R. 8 W.,  
 Sec. 1, lots 1, 2, 3, 4 including M. S. No. 865 Genevieve Placer, 5, 6, 7, and 8, NE $\frac{1}{4}$ SW $\frac{1}{4}$ , E $\frac{1}{2}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ , N $\frac{1}{2}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ , SW $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ .  
 T. 36 S., R. 6 W.,  
 Sec. 18, lots 5 and 6, DLC No. 40;  
 Sec. 19, lots 1, 2, and 3, SW $\frac{1}{4}$ NE $\frac{1}{4}$ , NE $\frac{1}{4}$ NW $\frac{1}{4}$ , unnumbered lot NW $\frac{1}{4}$ NW $\frac{1}{4}$ , N $\frac{1}{2}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ ;  
 Sec. 20, lots 4 and 5.

###### T. 36 S., R. 7 W.

- Sec. 1, lot 1;  
 Sec. 2, lots 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10, SW $\frac{1}{4}$ NE $\frac{1}{4}$ , unnumbered lot NE $\frac{1}{4}$ NW $\frac{1}{4}$ ;  
 Sec. 11, lots 1, 2, 3, 4, 5, 6, 7, and 8, S $\frac{1}{2}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ , SE $\frac{1}{4}$ SE $\frac{1}{4}$ , that portion of the SW $\frac{1}{4}$ SW $\frac{1}{4}$  lying east of Rogue River Loop Highway;  
 Sec. 12, lots 1, 2, and 3, W $\frac{1}{2}$ SW $\frac{1}{4}$ ;  
 Sec. 13, lots 1, 5, 6, 7, 8, and 9, N $\frac{1}{2}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ , NE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ , that portion of DLC No. 37 lying south of a line beginning at the east quarter corner of Section 13 and running northwesterly to the southeast corner of C.S. Survey 44-56 thence 856.5' west and thence 590' north and thence 620' west to the northwest corner of DLC No. 37;  
 Sec. 14, lots 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10, N $\frac{1}{2}$ N $\frac{1}{2}$ SE $\frac{1}{4}$ , that portion of DLC No. 38 lying north of the Rogue River Loop Highway also named Riverbank Road;  
 Sec. 24, NE $\frac{1}{4}$ NE $\frac{1}{4}$ .

#### APPENDIX B

##### LANDS INCLUDED WITHIN WILD RIVER BOUNDARIES

###### Willamette Meridian

- T. 33 S., R. 7 W.,  
 Sec. 31, lot 4;  
 T. 33 S., R. 8 W.,  
 Sec. 31, SE $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ ;  
 Sec. 32, lots 1, 2, 3, 4, 5, 6, and 7, S $\frac{1}{2}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ , E $\frac{1}{2}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ ;  
 Sec. 33, lots 1, 2, 3, 4, 5, 6, 7, and 8, S $\frac{1}{2}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$ , NE $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ , W $\frac{1}{2}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ , N $\frac{1}{2}$ S $\frac{1}{2}$ SE $\frac{1}{4}$ ;  
 Sec. 34, lots 1, 3, 4, 5, 6, 7, 8, 9, and 10, W $\frac{1}{2}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ , SE $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ , N $\frac{1}{2}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ , SE $\frac{1}{4}$ SW $\frac{1}{4}$ , M. S. No. 553 Gold Ring;  
 Sec. 35, lots 9 and 10, M. S. No. 553 Gold Ring, SE $\frac{1}{4}$ SW $\frac{1}{4}$ ;  
 Sec. 36, lot 5 and SW $\frac{1}{4}$ SE $\frac{1}{4}$ .  
 T. 33 S., R. 9 W.,  
 Sec. 8, S $\frac{1}{2}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ , S $\frac{1}{2}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ , SW $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ ;  
 Sec. 15, S $\frac{1}{2}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ , SE $\frac{1}{4}$ SW $\frac{1}{4}$ , SW $\frac{1}{4}$ SE $\frac{1}{4}$ ;  
 Sec. 16, lots 1, 2, 3, 4, and 5 W $\frac{1}{2}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$ , SE $\frac{1}{4}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$ , W $\frac{1}{2}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ , E $\frac{1}{2}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ , NW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ , W $\frac{1}{2}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ , SE $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ , S $\frac{1}{2}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ ;  
 Sec. 17, lots 1, 2, 3, 4, 5, 6, 7, and 8, N $\frac{1}{2}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ , N $\frac{1}{2}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ , NE $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$ ;  
 Sec. 18, lots 1, 2, 3 including Winkle Bar and Winkle Bar Extension M. S. No. 844, 4 including Winkle Bar and Winkle Bar Extension M. S. No. 844, 5 including Winkle Bar and Winkle Bar Extension M. S. No. 844, 6, 7, 8, 9, 11, 12 and 13, SE $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ , SW $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ ;  
 Sec. 21, lots 1, 2, and 3, N $\frac{1}{2}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ , SE $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ , N $\frac{1}{2}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ , SE $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ , NE $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$ ;  
 Sec. 22, lots 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, and 11, S $\frac{1}{2}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ , NW $\frac{1}{4}$ NW $\frac{1}{4}$ , N $\frac{1}{2}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ , N $\frac{1}{2}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ ;  
 Sec. 23, lots 1, 2, and 3, SW $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ , W $\frac{1}{2}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ ;  
 Sec. 26, lots 1, 2, 3, 4, 5, 6, 7, 8, and 9, W $\frac{1}{2}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$ , SW $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ , W $\frac{1}{2}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ ;  
 Sec. 27, E $\frac{1}{2}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ ;  
 Sec. 35, lots 1, 2, 3 including St. Charles Placer M. S. No. 862, 4, 5, 6 including Boston Placer and St. Charles Placer M. S. No. 862, 7 including Boston Placer M. S. No. 862, 8, 9 and 10, W $\frac{1}{2}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$ , W $\frac{1}{2}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ , SE $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ , E $\frac{1}{2}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ , S $\frac{1}{2}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$ ;  
 Sec. 36, lots 1, 2, and 3, SW $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ , S $\frac{1}{2}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ .



## T. 33 S., R. 10 W.,

Sec. 9, lots 1, 2, 3, and 4,  $S\frac{1}{2}SW\frac{1}{4}NE\frac{1}{4}$ ,  $SE\frac{1}{4}NE\frac{1}{4}$ ,  $E\frac{1}{2}NE\frac{1}{4}SW\frac{1}{4}$ ,  $SW\frac{1}{4}NE\frac{1}{4}$ ,  $SW\frac{1}{4}$ ,  $N\frac{1}{2}SE\frac{1}{4}SE\frac{1}{4}$ ;

Sec. 10, lots 1, 2, 5, 6, 7, 8, 9, 10, 11, 12, and 13,  $S\frac{1}{2}NE\frac{1}{4}NE\frac{1}{4}$ ,  $SE\frac{1}{4}NW\frac{1}{4}NE\frac{1}{4}$ ,  $NW\frac{1}{4}SW\frac{1}{4}SW\frac{1}{4}$ ,  $N\frac{1}{2}NE\frac{1}{4}SE\frac{1}{4}$ ;

Sec. 11, lots 1, 2, 3, 4, 5, 6, 7, 8, and 9,  $SW\frac{1}{4}NW\frac{1}{4}NW\frac{1}{4}$ ,  $W\frac{1}{2}SE\frac{1}{4}NW\frac{1}{4}$ ,  $SE\frac{1}{4}SE\frac{1}{4}NW\frac{1}{4}$ ,  $NE\frac{1}{4}SW\frac{1}{4}SW\frac{1}{4}$ ,  $W\frac{1}{2}NW\frac{1}{4}SE\frac{1}{4}$ ,  $SE\frac{1}{4}NW\frac{1}{4}SE\frac{1}{4}$ ,  $SW\frac{1}{4}NE\frac{1}{4}SE\frac{1}{4}$ ;

Sec. 12, lots 1 and 2,  $W\frac{1}{2}SW\frac{1}{4}SE\frac{1}{4}$ ,  $SE\frac{1}{4}SW\frac{1}{4}SE\frac{1}{4}$ ;

Sec. 13, lots 1, 2, 3, 4, 5, 6, 7, and 8,  $NE\frac{1}{4}SE\frac{1}{4}NW\frac{1}{4}$ ,  $NE\frac{1}{4}NE\frac{1}{4}SE\frac{1}{4}$ ;

Sec. 14, lots 1, 2, and 3,  $NE\frac{1}{4}NE\frac{1}{4}NW\frac{1}{4}$ .

## T. 34 S., R. 8 W.,

Sec. 1, lots 1, 2, 3, 4, 5, 6, and 7,  $NW\frac{1}{4}SW\frac{1}{4}NE\frac{1}{4}$ ,  $NW\frac{1}{4}NW\frac{1}{4}SW\frac{1}{4}$ , an island in the  $SW\frac{1}{4}NW\frac{1}{4}$  (lots 5 and 6);

Sec. 2, lots 1, 2, 3, 4, 5, 6, 7, and 8,  $NE\frac{1}{4}SW\frac{1}{4}NW\frac{1}{4}$ ,  $N\frac{1}{2}SE\frac{1}{4}NW\frac{1}{4}$ ,  $N\frac{1}{2}NE\frac{1}{4}SE\frac{1}{4}$ , an island in the  $SE\frac{1}{4}NE\frac{1}{4}$  (lots 7 and 8);

Sec. 3, lot 1;

Sec. 5, lots 3, 4, and 5,  $NW\frac{1}{4}SW\frac{1}{4}NW\frac{1}{4}$ ;

Sec. 6, lots 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, and 12,  $N\frac{1}{2}NE\frac{1}{4}SW\frac{1}{4}$ ,  $NW\frac{1}{4}NE\frac{1}{4}SE\frac{1}{4}$ ,  $N\frac{1}{2}NW\frac{1}{4}SE\frac{1}{4}$ .

## T. 34 S., R. 9 W.,

Sec. 1, lots 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10,  $N\frac{1}{2}N\frac{1}{2}SE\frac{1}{4}$ ;

Sec. 2, lots 1, 2, and 3;

[FR Doc.72-10099 Filed 7-6-72;8:45 am]



# Appendix B Outstandingly Remarkable Values







# Appendix B

## Oustandingly Remarkable Values



# Appendix B Outstanding Remarkable Values



# Natural Scenic Qualities

## Criteria for Outstandingly Remarkable Rating

The natural scenic qualities may be judged on the relative merits of either vegetation, geology, topography, or Congressional intent, or a combination of these river-related landscape factors. Consideration will be given for potential as well as existing values.

The landscape elements of land form, vegetation, water, color, texture, and related factors can result in notable or exemplary visual features or attractions. When analyzing scenic values, additional factors may be considered, such as seasonal variations (form, color, and texture), the scale and nature of cultural modifications, and the length of time negative visual intrusions are viewed. Scenery and visual attractions may be highly diverse over the majority of the river or river segment length and not common to other rivers in the geographic region.

## Evaluation of the Present Situation

### Vegetation

The Rogue has long been recognized for the diversity of its vegetation. Canyon live oak, Pacific madrone, Oregon myrtle, big leaf and vine maple, as well as a host of conifer species all contribute to the outstanding variety of visual hues and textural variation. The sheer volume of vegetation gives the viewer a sense of being in a lush environment.

As one progresses down river, the visual scene evolves from a rich alluvial riparian environment dominated by cottonwoods and maples to a drier site environment with a more sporadic vegetative character dominated by pine and fir interspersed with clumps of hardwoods. This change offers visitors a transitional scenic experience not found in many other river reaches.

### Geology

There are many places where the Rogue River has carved deep river canyons, such as the Hellgate Canyon, Taylor Creek Gorge, Kelsey Canyon, and Mule Creek Canyon. Steep canyon walls rise from the river. Layers of rock created by basalt flows form the canyon walls. In areas where the basalt rock is especially durable, rapids exist accentuated by boulders. Several small, sandy beaches add variety to the rocky shorelines.

The Rogue's geology is dominated by volcanic basalt, which has an interesting composition and texture that varies depending on the nature of its formation and deposition. Some exposed rock is of a rugged weather worn character while other formations display the volcanic nature of the rock as a columnar deposit and interesting symmetry rich in vertical line with geometrically consistent texture.

### Topography

The 27-mile Hellgate stretch contains two distinct landscape types. The Applegate Reach can be characterized as having a foreground scene that is essentially flat with the river meandering through an alluvial plane. Middle ground and background views are of rounded and forested hills and ridges. The Dunn Reach begins at Hellgate Canyon where the topography abruptly changes to a steep walled canyon with dramatic vertical relief. Foreground views are of rugged slopes with steep intersecting tributary drainages.



## **Congressional Intent**

Congressional records indicate the values ascribed to the Rogue when it was included as one of the eight rivers to be designated as wild and scenic upon passage of the Wild and Scenic Rivers Act of 1968. Language germane to the scenic quality of the Rogue is as follows:

The Rogue River drains the westerly slopes of the Cascade Range and is a major Pacific coast stream containing a diversity of scenic values. On its final passage to the ocean, the river cuts through the Klamath Mountains, probably the oldest and most complex mountains in Oregon.

The designated portion of the Rogue River has a range of visual resources. Several stretches of the river remain virtually in a natural state, passing through impressive rock gorges and canyons. The river passage is interrupted by numerous riffles and rapids. In other portions, the river flows through relatively undeveloped lands, marked only by an occasional farm.

The river varies from being slow, placid, and smooth to a river consisting of alternating series of riffles, rapids, smooth water, and pools flowing through a mountainous, steep-sided terrain. The 30-mile stretches of the river between Grave Creek and Flea Creek is almost in its natural state, scenic, impressive, and strikingly different from the remainder.

## **Finding**

The Wild and Scenic Rogue River is nationally recognized for its scenic qualities. Tree-covered benches with rugged mountains rising behind them, spectacular rock formations, and the river itself create a beautiful landscape. Great contrasts of land form, vegetation, color, climate, and sound are found. Scenery within view of the Wild and Scenic Rogue River is an outstandingly remarkable value.

## **Fisheries**

### **Criteria for Outstandingly Remarkable Rating**

Fish values may be judged on the merits of either fish populations, habitat, or both. Consideration is given for potential as well as existing values.

#### **Populations**

The river is internationally, nationally, and regionally recognized for production of hatchery and wild anadromous fish. The wild stocks of some salmonids are of particular significance because of the potential for federal listing of threatened and endangered species. The diverse fish populations are important economically and biologically for fulfillment of the Rogue River fishery. Salmonid populations alone are an important consideration and may qualify as a determination of outstandingly remarkable.

The Rogue National Wild and Scenic River Revised Development and Management Plan of 1972 describes the Rogue River as, "...an anadromous fish highway. There is no time during the year when there are not mature fish in the river making their way upstream to spawn or young fish working their way to the ocean to grow and mature." The river has outstanding fishing qualities over numerous miles.

Congress described the Rogue River in the past as famous for its salmon and steelhead fishing. Annual return of fall chinook salmon numbers averaged 41,108 from 1974-1991, summer steelhead numbers averaged 129,500 from 1976-1981, and winter steelhead averaged 46,500 from 1977-1980. The Rogue River is a big-fish stream with salmon catches exceeding 40 pounds and steelhead 15 pounds.



The Rogue River, which attracts international recognition, was recognized by Congress because of the challenge it afforded to people for boating and fishing. Congress also recognized the importance to preserve and conserve the fisheries resource.

The Rogue River provides an internationally-renowned fishery. Fisheries of major importance are summer and winter steelhead, spring and fall chinook, and coho salmon. Anadromous fish adults migrate from the Pacific Ocean upstream to spawn and the young fish migrate from the streams to the Pacific to grow and mature.

The river provides an extensive habitat for spawning and rearing opportunities primarily for anadromous fish. The good water quality and quantity in the mainstem Rogue River is attributed in part to dams, which provide adequate water temperatures and flows during critical summer months for anadromous fish. Hatchery supplementation to the wild run fisheries occurs for chinook, coho, and steelhead.

The Rogue River basin is the largest producer of steelhead in Oregon and one of the largest on the Pacific coast (Cramer et al. 1985), excluding the Columbia River. The Rogue River is one of only three rivers in North America that supports an annual migration of "half-pounder" summer-run steelhead.

Key factors that are pertinent to evaluation of the fisheries resource include: harvest, diversity, abundance, and distribution of fish populations. Populations of wild steelhead and coho salmon have been in a general decline during the record keeping period of 1940-1996. The wild coho salmon population in the Rogue River basin is severely depressed with declining habitat.

The Rogue River and its tributaries are the largest salmon and steelhead producer of Oregon's coastal streams south of the Columbia River and one of the most important on the Pacific coast. An average of 32,100 spring chinook, 45,000 fall chinook, 130,300 summer steelhead, 44,000 winter steelhead, and 6,800 coho salmon return to the river annually (ODFW 1992d).

Populations of Rogue River spring and fall chinook salmon are the largest among Oregon's river basins south of the Columbia River. They contributed about one-third of the state's commercial catch during 1979-1986 (Nicholas and Hankin 1988). Rogue chinook contribute to commercial and recreational fisheries off the coast of northern California and southwest Oregon. Fall chinook salmon in the Rogue River is the largest on the coast of Oregon (Nicholas and Hankin 1988).

The abundance of freshwater spring chinook reveals a long-term trend. The number of wild and hatchery adults passing Gold Ray Dam between 1942 and 1990 has fluctuated from 12,500 to 89,500, averaging 32,100 annually (ODFW 1992a). The population of wild fish, which currently accounts for approximately 50 percent of the Rogue River's spring-run, has declined since Lost Creek Dam began operation in 1978 (Satterthwaite 1987). Spawning and rearing habitat for salmon and steelhead blocked or inundated by Rogue basin project dams (i.e., Lost Creek and Applegate dams) is mitigated by releases of fish reared at Lost Creek Hatchery. Approximately 1.6 million spring chinook smolts released annually by the hatchery (ODFW 1990a) migrate seaward through the Hellgate Recreation Area from August through October (Cramer et al. 1985).

Adult spring chinook migrate from the Pacific ocean to the river in mid-March and have passed through the Hellgate Recreation Area by the end of July en route to spawning areas, primarily in the river between the Gold Ray Dam impoundment and Cole M. Rivers Hatchery at Lost Creek Dam. Peak migration usually occurs during June. Spring chinook spawning occurs from September through mid-November with a peak normally during early October (ODFW 1991a). Spring chinook are hatchery supplemented as opposed to fall chinook, which are maintained exclusively through natural production. Freshwater returns of adult fish have varied extensively, ranging from 18,200 to 98,300 between 1974 and 1986. A long-term population trend is not apparent.



Fall chinook spawning in the Hellgate Recreation Area is approximately 14 percent of all fall chinook spawning in the Rogue River (USDI, BLM, MDO 1992). In some years, approximately 10 percent of the run spawns before October (Satterthwaite 1992). Fall chinook fry emerge from the gravel in the Hellgate Recreation Area between late February and May (ODFW 1992d).

Fall chinook begin entering the river in mid-July and support an important sport fishery in the Hellgate Recreation Area during August and September. An average of 2,300 fall chinook spawn annually in the 3 miles of river between Lathrop Park, near Grants Pass, downstream to the mouth of the Applegate River. Another 5,400 spawn in the river between the Applegate River and Hog Creek (ODFW 1992b).

Average weight for fall and spring chinook is approximately 15 pounds. Typical maximum weight for fall chinook is 60 pounds and spring chinook 55 pounds (Evenson 1992).

Adult coho salmon enter the mouth of the Rogue River in mid-September and pass through the Hellgate Recreation Area in October and November. The bulk of wild coho production in the Rogue basin probably occurs in the Illinois River subbasin, downstream from the Hellgate Recreation Area (ODFW 1991b). Returns of wild and hatchery coho to the river during the period 1976-1986 ranged from 200 to 23,900, averaging 6,800 fish annually; approximately 50 percent of the run originates from Cole M. Rivers Hatchery. Annual commercial landings of hatchery fish have averaged approximately 3,600. During 1979-1986, freshwater harvest averaged approximately 40 wild and 200 hatchery fish annually (ODFW 1991b). Approximately 200,000 coho smolts are reared and released annually at Cole M. Rivers Hatchery (ODFW 1992c). Most coho spend approximately 15 months in the ocean before returning to spawn as three-year olds; some also return as age two jacks.

Coho salmon numbers have dramatically decreased. Coho production potential and habitat complexity have subsequently decreased as a result of agricultural practices, timber harvest, and road activities. Fish numbers were very high during the 1800s and early 1900s. Over harvest of anadromous fish also reduced numbers in the late 1800s and in the early 1900s.

During years of adequate precipitation and stream flow, most coho and steelhead adults spawn in the river's tributaries that flow into the Hellgate Recreation Area. During drought conditions, many tributaries are dry or have intermittent flow. Adults are then forced to spawn in the mainstem of the Rogue River (ODFW 1990b). Approximately 30 percent of winter steelhead adults return to the river as half-pounders after four months in the ocean. Most adults on their first spawning run have spent one to two years in the ocean. Approximately 15 percent of wild winter-run fish are repeat spawners (ODFW 1990b). Adults that average seven pounds, but occasionally reach 15, select spawning sites on low gradient riffles in small to moderate size gravel.

The majority of winter steelhead juveniles migrate to the ocean in late spring, measuring eight to ten inches in length after two years of residence in freshwater (ODFW 1990b). Cole M. Rivers Hatchery annually releases approximately 300,000 winter steelhead smolts into the upper Rogue and Applegate rivers (Evenson 1992). Hatchery and wild smolts migrate through the Hellgate Recreation Area to the ocean from April through June.

Summer steelhead enter the river in three distinct groups each year. Early-run adults enter the river in May, June, and July; half-pounders primarily in August and September; late-run adults in August, September, and October. Adults average 3 to 4 pounds each; half-pounders are 11-17 inches in length and weigh one to two pounds. Return of wild and hatchery-reared summer-run steelhead to the Rogue basin range from 38,700 to 272,500 for run years 1976-77 through 1991-92, averaging 130,300 (ODFW 1992a).

Rogue River tributaries in the vicinity of Gold Hill have been the stronghold of wild summer steelhead production in the basin. Averaging three to four pounds, females produce approximately 2,300 eggs each (Evenson 1992).



Summer-run steelhead spawn in 72 tributaries of the Rogue River between Whiskey Creek and Lost Creek Dam and in 21 tributaries of the Applegate River (Everest 1973).

The small size of the summer steelhead is primarily due to their tendency to make an initial upstream migration as a "half-pounder" and to make subsequent annual spawning runs until death. Smolts entering the ocean between April and June remain there for three to five months before making their first upstream migration between July and November as half-pounders.

Approximately 97 percent of adult summer steelhead make their first upstream migration as half-pounders (Everest 1973). Half-pounders move as far upstream as Touvelle Park in the summer and fall, although the majority remain downstream from Galice Creek. They remain in the river six to nine months, migrate back to the ocean in March and April, and then return to the river during mid-summer on a true spawning migration that lasts six to nine months. Adults spend only three to four months at sea between spawning runs. Summer-run steelhead support an intense fishery in the Hellgate Recreation Area from September through March.

## Habitat

Prior to European settlement, tributaries to the Wild and Scenic Rogue River section had robust beaver and salmon populations and a mixture of mature conifer and hardwood riparian areas. Streams meandered with unconstrained channels. Multiple stream channels dissipated flows, creating fish habitat. Stream channels contained large amounts of large woody material for insect and fish production, low water temperatures ideal for salmonids, and low amounts of sediment in the gravels or stream substrate.

The riverine habitat is primarily of high quality and generally produces adequate spawning substrate, rearing area, flows and water temperature for all species. Habitat for wild stocks of salmonids is protected and enhanced by local, state, and federal governments in response to the continued degradation of habitat in the Rogue basin tributaries. Habitat for wild stocks of salmonids is of particular significance combined with the potential for federal listing of threatened and endangered species. Diversity of habitat is an important aspect for fulfilling the life history requirements (i.e., spawning, rearing, and migration) of the Rogue River fishery ecology. Salmonid habitat alone is an important consideration and may qualify as a determination of outstandingly remarkable.

In general, good instream and riparian habitat quality exists in the mainstem Rogue River. The mainstem Rogue River habitat is a migration corridor for anadromous fish. Habitat for fish includes: instream substrate, water quality, water quantity, and riparian area vegetation.

The mainstem Rogue River habitat is primarily controlled by water releases from Lost Creek and Applegate dams. Lost Creek Dam significantly changed the flow regimes, providing dedicated reservoir storage for the primary purpose of downstream temperature control for chinook summer migration. These flows provide the adequate water quantity and quality needed by anadromous fish.

Migration and rearing habitat are utilized year-round by adult and juvenile anadromous fish. Chinook salmon primarily spawn in the mainstem Rogue River. Water quantity and quality in general is not optimal in the tributaries to the Wild and Scenic River section.

Adult spring chinook migrate in the spring and holdover until late summer and early fall to spawn. Cool water flows from tributaries in the Wild and Scenic River section and are essential for maturing spring chinook in the mainstem Rogue River. Spring chinook spawn primarily above Gold Ray Dam. The majority of fall chinook spawn below Gold Ray Dam, but they are found in lower numbers above Gold Ray Dam.

The condition of fish rearing habitats is directly related to the condition of the river's margin and associated riparian habitat as well as the temperature and flow. During the past century, the river



flow regime has changed, yet this has not been detrimental to the runs. During the past century, there has been a downward trend in the quality of a tributary habitat due to cumulative impacts from degraded riparian vegetation, instream channelization, water withdrawals, timber harvesting, upland road construction, grazing, and mining.

Land management activities have substantially altered the timing and quantity of erosion and changes in stream channels, all which have impacted fish production at one time or another. Streams and riparian areas with Federal ownership are in better condition than streams on private lands. During low flow periods, water flows from Federal lands and in other areas is totally withdrawn for irrigation on private lands, leaving the streambed dry.

## **Finding**

The fish stocks are important internationally, nationally, and regionally for their sport and commercial fishing contribution. The diverse Rogue River aquatic resource is important to the continued existence of these important species. Congress acknowledged the unique characteristics of the fisheries resources in the Rogue River. Fisheries are an outstandingly remarkable value of the Rogue River.

Coho salmon and steelhead are listed as threatened species. These fish are truly a national treasure and a key component of the economy and quality of life of southwest Oregon and the nation.

A substantial portion of the basin's juvenile and adult fish utilize the Wild and Scenic Rogue River section for migration, spawning, or rearing. Approximately 50 percent of the coho salmon and all spring chinook salmon produced in the Rogue basin originate upstream of the Wild and Scenic Rogue River.

Approximately 14 percent of the basin's fall chinook salmon spawn in the recreation section. Juvenile wild salmon and steelhead rearing in or upstream of the recreation section use the river as a migration corridor to the ocean throughout the year.

The 2.2 million salmon and steelhead smolts produced annually by Cole M. Rivers Hatchery migrate seaward through the Wild and Scenic Rogue River from April through October.

The affected habitat focuses on the mainstem Rogue River in the Hellgate Recreation Area and tributaries associated with this section of the river. The mainstem habitat is fair to good and is primarily important for chinook spawning and rearing. Habitat in the tributaries is fair to poor. Tributaries are important habitat primarily for coho salmon and steelhead spawning and rearing. Tributaries lack: (1) adequate riparian vegetation to keep streams cool, (2) coarse wood or downed logs in the riparian area and in the stream, and (3) have excess sediment in spawning gravels from watershed activities. All waters need adequate flow and good water quality for migration.

## **Recreation**

### **Criteria for Outstandingly Remarkable Rating**

Recreational opportunity may be judged by the relative quality and quantity of camping, boat and bank angling, hiking, jet boating, sightseeing, swimming, white water floating, and wildlife observation experiences available.

Existing recreational opportunities have the potential to attract visitors from outside the geographic area. Visitors are willing to travel long distances to use the river resources for recreational purposes. River-related opportunities include, but are not limited to, fishing, hiking, jet boating, photography, sightseeing, white water floating, and wildlife observation.



Interpretive opportunities attract visitors from outside the geographic area as well.

## **Evaluation of the Present Situation**

### **Jet Boating/White Water Floating**

The Rogue River was first traveled downstream from Grants Pass to the Pacific Ocean in 1915. The first trip upstream from the ocean to Grants Pass was made in 1947. Since that time, improvements in boats (motorized and nonmotorized), equipment, knowledge and skills, and increasing interest in river resources have supported a large expansion in activity types and numbers of visitors.

The Rogue River offers a blend of motorized and nonmotorized boating in a setting that is unique in North America. Recreationists can pursue a variety of activities in a backcountry river environment. Unlike most rivers in a backcountry setting, the Rogue River is accessible by different types of watercraft and provides a variety of white water challenges. It allows visitors to gain an appreciation and understanding of other users from diverse social backgrounds and with various recreational interests. Recreationists commonly use the river for both motorized and nonmotorized recreation.

Class I to IV rapids provide a variety of challenges for novice to intermediate boaters based on skill level of the boater and the type of watercraft used, such as powerboats, rafts, kayaks, and canoes. Running white water can be combined with traveling through placid, quiet stretches of river on the same trip. The angling, cultural and historical sites, floating, scenic beauty, and wildlife of the area attract power boaters and float boaters to the river.

The quality of Class I to IV white water floating is equal to all other similar experiences in the Pacific Northwest. Float boaters can run a variety of trip lengths, usually one to four days in duration. The Hellgate Recreation Area from the Applegate to Grave Creek contains Class I to II rapids. This area provides an excellent opportunity for less-experienced float boaters and families with children to float through a major river canyon. The Class I to IV rapids are found in the wild section down river from Grave Creek to Watson Creek. The lower Rogue below Watson Creek has Class I to II rapids. Recreational demand for a float trip on the Rogue River is high in the Hellgate Recreation Area (approximately 30,000 annually) and the wild section (approximately 10,000 annually). Private and commercial demand is regional, national, and international in scope.

This is a premier white water power boating river in the United States and is one of the few areas available for power boaters to travel in a back country setting. There are three main types of powerboat use on the river.

- Commercial motorized tour boating that occurs daily during the summer from the Pacific Ocean at Gold Beach to Agness or Paradise Bar and return to Gold Beach carries approximately 50,000 visitors annually.
- Commercial motorized tour boating that occurs daily during the summer from Grants Pass into the Hellgate Recreation Area and back carries more than 70,000 visitors annually.
- A substantially fewer number of people use private motorized boats for fishing, sightseeing, or just pleasure boating (less than 1,000 visitors annually in the Hellgate Recreation Area and approximately 5,000 visitors annually between Watson and Lobster creeks).

### **Fishing**

The Rogue River supports recreational and commercial fisheries of immense importance to Oregonians. It is internationally renowned for fish species diversity and productivity. It is a "big



fish" river that produces salmon upward of 40 pounds and steelhead exceeding 15 pounds. The mainstem and tributaries of the Rogue River collectively produce the largest population of wild anadromous salmonids in Oregon. The most economically and socially important of these are the Pacific salmon, spring and fall chinook, coho, and summer and winter steelhead. Resident rainbow and cutthroat trout are also present.

The character of the Rogue River, its setting, and the character of the anadromous salmon and steelhead provides the angler with diverse fishing opportunities. Anglers use bait, hardware, or flies and fish from the shore or by wading, trolling, or floating. The use of drift boats for angling is historically and presently an important element of the river's cultural landscape. Angling activity is viewed by geographic section of the river.

- Annual angling use in the Hellgate Recreation Area is more than 8,000 fishing days. Fishing occurs year-round, but the large majority occurs during the late winter and fall. February and March have high use because anglers are fishing for winter steelhead and spring chinook. Another surge of activity occurs in September and October when anglers are after summer steelhead and fall chinook.

## **Hiking**

Trail users come to the river during the spring and fall seasons because of the favorable climate. Steep, narrow trails wind through spectacular scenery accented by the river in a backcountry setting. Many of the area's trails have their origins in historic gold mining which started in the mid-1800s. The National Wild and Scenic Rogue River corridor also provides access to the adjacent Rogue Wilderness with its great variety of challenges and experiences.

The designation of the Rogue River Trail from Grave Creek to Illahe as a national recreation trail indicates the high quality of the experience for trail users. Backpacking within the river corridor provides a wonderful backcountry experience in a remote river location set amidst incredible scenery with outstanding wildlife viewing opportunities. National and regional newspaper and magazine articles regularly feature the early springtime trail use.

## **Interpretation**

Diverse, accessible, and observable plant life, wildlife, geologic formations, and cultural sites provide a variety of interpretive themes. Prehistoric sites and a colorful history of exploration, mining, and settlement combine to create several national historic sites.

## **Fish and Wildlife Observation**

Fish and wildlife resources contribute greatly to the recreational values of the Rogue River. In addition to their harvest value, these animals are easily viewed in their natural habitat and have substantial aesthetic value. Wildlife viewing on the Rogue River is regionally significant.

The Rogue River basin provides habitat for several large herds of black-tailed deer. These animals are commonly seen along the river. Elk are seen occasionally along the river banks. Large numbers of black bear live along the river and are occasionally seen. Mountain lion and wild turkey populations are increasing in the wild section.

There is no time during the year when there are not mature fish somewhere in the river making their way upstream to spawn, or to grow and mature. Anadromous fish include two races of steelhead, sea-run cutthroat trout, chinook and coho salmon, two species of sturgeon and shad. Resident fish include rainbow and cutthroat trout and six species of warm-water game fish.

The National Marine Fisheries Service listed wild coho salmon as a threatened species on May 1, 1997 (i.e., three distinct populations of coho salmon from the San Lorenzo River in California to Cape Blanco). The listing applies to the wild coho of the Rogue River (see Chapter 3, Fisheries).



Small animal species natural to the area include fur bearers, such as mink, otter, beaver, muskrats, weasels, and raccoons. Upland game species that may be observed along the river include grey squirrels, Chinese pheasants, California and mountain quail, blue and ruffed grouse, band-tailed pigeons, and mourning doves.

Large numbers of American mergansers, and fewer numbers of osprey, mallards, and wood ducks nest along the river. Because the Rogue River is not a major migratory flyway, wintering use and harvest are light. Other birds that inhabit the area are the Kingfisher, water ouzel, osprey, great blue heron, green heron, and numerous song-bird species.

Threatened or endangered species are those species listed under the Endangered Species Act (ESA) 1973 as amended. Currently, three threatened and one endangered listed species use habitats in the corridor. Species listed as threatened under the ESA are the bald eagle, northern spotted owl, and marbled murrelet. Peregrine falcons are the only species listed as endangered.

### **Sightseeing/Driving for Pleasure**

Many people take advantage of driving along the paved roads that parallel different sections of the National Wild and Scenic Rogue River. Paved roads along the river from Gold Beach to Foster Bar and from Grants Pass to Grave Creek serve as take-out sites for wild section floaters. Large portions of these paved roads are nationally-designated back country byways and offer access to a diversity of landscapes and attractions. They provide opportunities to view a variety of fish and wildlife in their native habitat, explore historical attractions, and photograph spectacular scenery. It is estimated that over one-half million visitors to the river visit for the purpose of sightseeing or driving for pleasure. These trips may or may not be associated with another recreational activity like boating, camping, and picnicking.







# Appendix C

## Management Standards

### for the Hellgate

### Recreation Area, A

### Recreational Area

#### Air Quality

Management standards for air quality include the National Ambient Air Quality Standards, Federal Air Quality Criteria, and the Oregon Air Quality Management Plan and Oregon Air Quality Management Plan.

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#### Wildlife Conservation Strategy

The Wildlife Conservation Strategy was developed and adopted primarily to provide guidance and support for the management of the Hellgate Recreation Area. The strategy includes the following: (1) a description of the area's wildlife resources; (2) a description of the threats to these resources; (3) a description of the management actions to be taken to protect and enhance these resources; and (4) a description of the monitoring and evaluation system to be used to assess the effectiveness of the management actions.

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# Appendix C Management Standards for the Hellgate Recreation Area, A Recreational Area



The following are program management standards that apply to the Hellgate Recreation Area (I.B. No. OR-90-73).

## **Agricultural Practices and Livestock Grazing**

Agriculture and livestock grazing on BLM-administered land is not permitted unless it is demonstrated that the activity would be beneficial to the outstandingly remarkable values (ORVs) or other recreational river resources such as wildlife (see Aquatic Conservation Strategy) (RMP/ROD p.81).

Any grazing on private land is encouraged to occur outside the riparian zone.

**Supplemental Information** - Presently, there is very little grazing land within the river boundaries. Private land now in pasture is compatible with the scenic qualities of the river and may continue to be used for that purpose.

## **Air Quality**

Management standards include meeting the National Ambient Air Quality Standards, Prevention of Significant Deterioration, and the Oregon Visibility Protection Plan and Smoke Management Plan Goals.

Maintain and enhance air quality and visibility in a manner consistent with the Clean Air Act and the State Implementation Plan.

Standards for Class II sensitive air quality areas are applicable to the Hellgate Recreation Area of the Rogue River.

## **Aquatic Conservation Strategy**

The Aquatic Conservation strategy was developed and adapted primarily to protect salmon and steelhead. The four elements of the strategy are riparian reserves, key watersheds, watershed analysis, and watershed restoration. These components are designed to operate together to maintain and restore the productivity and resiliency of riparian and aquatic ecosystems.

Riparian reserves specify a certain width on each side of fish-bearing, nonfish-bearing, and intermittent streams as well as around wetlands, ponds, lakes, and unstable and potentially unstable lands. Standards and guidelines for these reserves prohibit or regulate activities not designed specifically to maintain or restore the structure and function of the reserve and benefit fish habitat. Specific standards and guidelines for various resource management activities are included in Appendix B and C of the Final Supplemental Environmental Impact Statement on Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl, Aquatic Conservation Strategy.

Key watersheds contain at-risk anadromous salmonids, and/or resident fish species, or are important sources of high quality water. Key watershed designation does not preclude regularly scheduled timber harvest and other management activities. However, watershed analysis is required in these areas before any management activities can occur and the results of the analysis must be incorporated into the decision-making process. The exception is in the short term and until watershed analysis can be completed and minor activities, such as those that would be categorically excluded under National Environmental Policy Act regulations (except timber harvest) may proceed, consistent with riparian reserve standards and guidelines.

The watershed analysis section of Appendix B6 to the Final Supplemental Environmental Impact Statement on Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl, Aquatic Conservation Strategy,



describes procedures for conducting analysis that evaluates geomorphic and ecologic processes operating in specific watersheds. This analysis should enable the watershed planning that achieves aquatic conservation strategy objectives. Watershed analysis provides the basis for monitoring and restoration programs and the foundation from which riparian reserves can be further delineated.

Watershed restoration is a comprehensive, long-term program to restore watershed health and aquatic ecosystems, including the habitats supporting fish and other aquatic and riparian-dependant organisms.

## **Botanical Resource Protection**

Special Status or Survey and Manage vascular plant surveys would be completed in accordance with approved protocols.

If any Survey and Manage Component 1 or 2 species are found, a no-harvest, no-ground disturbance protection buffer will be implemented around each population. Actual buffer size will be dependent on microsite conditions required to maintain habitat as required by Northwest Forest Plan Management Recommendations. No slashing and burning would take place within these buffers.

If federal or state listed, candidate or Bureau Sensitive species are found, a minimum 100-foot radius no-harvest, no-ground disturbance protection buffer will be required. For other Special Status species, a protection buffer will be decided upon on a case-by-case basis, depending on the species' habitat requirements.

Burns in areas containing special status plant species would follow prescriptions that result in "cool" burns which minimize potential damage to plant populations. Prescribed fire operations would be done in a manner which strives to reduce or eliminate burning through identified Special Status plant population areas depending on the adaptability of each species to fire. Prescribed fire contracts would articulate the necessary steps to reduce or eliminate fires in these sensitive areas.

## **Commercial Use of Public Lands**

Conducting any kind of commercial use on public lands without a special use permit is prohibited. Activity types requiring a permit are outfitter services, movies, business concessions, and photography activities.

Facility development for commercial uses adjacent to the river are highly restricted. However, there may be instances where it is necessary to locate commercial public service facilities within the recreational river boundaries. Where other developments are necessary within the boundaries, they will be designed and placed so as to be as unobtrusive as possible. Vegetative screening and topography will be used to keep them from direct view of the river.

**Supplemental Information** - Commercial use is use of the public lands and related waters for business or financial gain. When any permittee, employee, or agent of a permittee, operator, or participant makes or attempts to make a profit, salary, increase his capital worth, advance or promote his business or financial standing, or supports, in any part, other programs or activities from amounts received from or for services rendered to customers or participants in the permitted activity, as a result of having a special recreation permit, the use will be considered commercial.

Any person, group, or organization seeking to qualify as noncommercial shall have the burden of establishing that no financial or business gain will be derived from the proposed use.



Noncommercial use is any recreational use that does not meet the criteria stated above for commercial use.

The following definition of noncommercial is from the backside of the Rogue River Noncommercial Use Permit. It refers to a group of private boaters.

There is a bonafide sharing of expenses.

There are no fees collected in excess of the actual cost of the trip.

There is no financial gain by any member of the group.

No salary is directed from shared expenses of the trip.

No charge is collected for use of the equipment.

## **Cultural Resources**

Historic and prehistoric resource sites would be identified, evaluated, and protected in a manner compatible with the management objectives of the river and in accordance with applicable regulations and policies. Where appropriate, historic or prehistoric sites would be stabilized, enhanced, and interpreted.

**Supplemental Information** - Cultural resources will be managed in accordance with regulations found in 36 CFR 800, which ensure that federally authorized land use actions do not inadvertently harm or destroy federal or nonfederal cultural resources. Other legislation, especially the Archaeological Resources Protection Act, calls for the identification of cultural resources, together with public awareness programs to explain the significance of those resources.

## **Fire Protection and Suppression**

Management and suppression of fires would be carried out in a manner compatible with contiguous federal lands. On wildfires, suppression methods that minimize long-term impacts on the river and river area will be used. Presuppression and prevention activities would be conducted in a manner that reflects management objectives for the specific river segment. Prescribed fire may be used to maintain or restore ecological condition or meet objectives of the river management plan.

**Supplemental Information** - Fire management standards for the Bureau of Land Management are described in the Bureau of Land Management, Medford District RMP (see Appendix 2-WS-2, BLM Medford Draft RMP/EIS). Wildfire suppression would be conducted in a manner that reflects management objectives of maintaining the scenic quality. Prescribed fire use would be allowed when its use maintains or enhances the scenic natural environment.

Due to the roadless character along segments of the river and the need to maintain this character, special protection requirements are established.

The unique and irreplaceable values involved need prompt control of wildfires.

Wildfire control would be accomplished with the least amount of impact to the environment.

Restoration action would be taken to reduce the impact and return the damaged area to its original condition.



## **Building, Maintaining, Attending, or Using a Fire**

The following acts are prohibited.

Carelessly or negligently throwing or placing any burning substance (or any other substance that may cause a fire), firework, or explosive into any place where it might start a fire.

Causing timber, slash, brush, or grass to burn.

Leaving a fire without completely extinguishing it.

Allowing a fire to escape from control.

Building, attending, maintaining, or using a campfire without adequately removing all flammable material from around the campfire, which could allow its escape.

Failing to observe State fire closure regulations or notices issued by the Oregon State Department of Forestry.

## **Fish**

Protect fish species considered to be threatened or endangered.

Manage resources and visitors so that the fishery is enhanced.

## **Fish and Wildlife Habitat Improvement**

The construction and maintenance of minor structures for the protection, conservation, rehabilitation, or enhancement of fish and wildlife habitat are acceptable provided they do not affect the free-flowing characteristics of the river, are compatible with a recreational river classification, that the area remains natural in appearance, and the practices or structures harmonize with the surrounding environment.

## **Forestry Practices**

The public lands are unavailable for planned forest management except as part of strategies to enhance the outstandingly remarkable values for which the river was designated.

**Supplemental Information** - The most important value of the timber within the boundaries is in the makeup of the landscape. Timber management, therefore, will be directed toward maintaining or restoring an aesthetically pleasing timber stand.

Removal of timber is not precluded within the boundaries. When timber is to be removed, it will be done in a manner that has the least possible adverse effect on the landscape.

Timber may be removed in cases of natural catastrophe, such as fire or windthrow with its resultant buildup of insects or natural occurrences of insects or diseases, which could become epidemics. The decision on whether to remove the timber will be made after considering all factors and will be based on what will be least destructive to the river area values.

Protection of timber visible from the river or its environs within the river boundaries will be accomplished through scenic easement purchase of the timber on privately-owned lands or on nonprivate lands through cooperative agreements. Each situation will require individual analysis and judgement.



## **Hazardous Materials**

Hazardous materials management would be according to the Comprehensive Environmental Responsive Compensation and Liability Act of 1980 and as amended by the Superfund Amendment and Reauthorization Act of 1982. It would include emergency removal, sampling and analysis, safety and law enforcement staff involvement, and potentially responsible party search for cost recovery.

### **Supplemental In**

**formation** - The BLM's response to the release or threat of release of hazardous materials that could affect human health or the environment would be limited to BLM-administered lands. Hazardous materials release on other lands would be subject to local response in accordance with the Oregon Department of Environmental Quality rules and statutes.

## **Health and Safety**

Management actions would be taken to prevent, stop, or reverse any significant health or safety hazard caused by human use.

Alteration of the stream bed and vegetation manipulation will be limited to that necessary to maintain safe navigation. Modification of bedrock will not be permitted. All actions will be designed for the protection and management of the outstandingly remarkable values (ORVs).

**Supplemental Information** - Sites of concern exist along the Rogue River. Specific portions of the river, which due to physical conditions, create reduced jet boat/motorized tour boat options that could result in accidents or unacceptable close encounters with other boat traffic even when best operator skill and most prudent judgements are used.

Gravel can shift and brush can grow creating new sites of concern or changing the conditions of existing sites of concern. It is a common condition for river gravel to move during high flow conditions. River channels may change and gravel may be shifted and deposited in different configurations. These changes in the river bottom can lead to restricted depth and width creating conditions that are dangerous and even impassable for motorized tour boats and other jet boats and deep draft watercraft. It is possible with the use of heavy equipment to reposition the gravel to eliminate this safety problem. It may at times be necessary to move gravel with mechanized equipment to provide for safe passage of motorized boats through safety sites of concern.

Safety at sites of concern may also be improved by cutting vegetation when the line-of-sight is obscured by growing riparian vegetation; this is a historical practice in the Hellgate Recreation Area. The drought of the last 15 years and the lack of major scouring floods has enabled the riparian vegetation to flourish.

## **Hydroelectric Power**

No development of hydroelectric power facilities would be permitted.

## **Water Withdrawal for Domestic or Agricultural Use**

**Supplemental Information** - Pump screening standards vary.

Each situation is different. The goal is to screen the pump and pipes so they blend into the natural surroundings. In some cases, careful placement of the pump may be all that is necessary. The size of the pump and the type of pump (diesel or electric) would be important factors in developing adequate screening. Brush or shrubs would usually be helpful for visual screening.



The landowner has no responsibility to screen a pump if the pump was in use at the time the scenic easement was acquired.

The BLM has the right to screen existing pumps.

New pumps on private or BLM-administered lands are required to be screened by the owner.

Sound can be reduced or eliminated by the type of pump and its placement by enclosures.

## **Improvements**

There are places along the river where new developments or resource improvements may be desirable to meet public needs.

Structures that can be seen from the river, trail, or developed recreation sites will have the following:

- Be of aesthetic design.

- Have sufficient topography or vegetative screening to reduce visual impacts of improvements.

- Be designed so that little or no soil is left exposed when construction is complete. Contain no direct or indirect design features that are obtrusive or incompatible with the scenic qualities of the area. A direct design feature is one which is a physical part of the development (i.e., incompatible direct design features are shiny metal siding or roofing, large areas of bright colors, large or lighted signs). An indirect design feature is one resulting from the development (i.e., incompatible indirect design features are noise, smoke, odor). Structures that cannot be seen from the river will contain no indirect design features obtrusive or incompatible with the scenic qualities of the area and will be designed so that little or no soil is left exposed when construction is complete.

- Improvements on private land are controlled through purchase of scenic easements.

- Additional recreation residences will not be permitted on public lands.

- No new developments, except trails, boat ramps, mooring facilities, and service roads, will be allowed below the high-water line of December 1964, except where land was covered with slack water and is not visible from the river.

Structures are permitted provided they are in harmony with their surroundings: residential buildings, farmsteads and appurtenant facilities, and lodges or public recreation facilities needed to serve the river user.

Where other developments are necessary within the boundaries, they will be designed and placed so as to be as unobtrusive as possible. Vegetative screening and topography will be used to keep them from direct view of the river.

Other structures will be permitted where necessary for the administration of the river or essential to accomplish other activities allowed in this area.

## **Insects, Diseases, and Noxious Weeds**

Any control of forest and range land pests, diseases, and noxious weed infestations would be carried out in a manner compatible with the intent of the Act and management objectives of contiguous federal lands.



## **Instream Flow Assessment**

To the extent practical and consistent with resource management objectives, quantify instream flow and protection requirements related to outstandingly remarkable and other resource values.

The Oregon Water Resources Commission determined streamflows necessary for recreation, fish, and wildlife uses within scenic waterways for the Rogue River on October 3, 1991. The following are the approved waterway flows in mean minimum monthly flow (cfs) as measured near Agness, Oregon (gauge # 14372300).

<u>Month</u>	<u>Flows</u>
January	3,500
February	3,500
March	3,500
April	3,500
May	3,000
June	2,700
July	2,000
August	2,000-2,400
September	2,400-1,600
October	1,600
November	1,600-3,500
December	3,500

## **Instream Flow Assessment for the Outstandingly Remarkable Value of Natural Scenic Qualities**

The instream flow requirement for natural scenic qualities is the natural flow.

## **Instream Flow Assessment for the Outstandingly Remarkable Value of Fisheries Resource**

In an average water year, the instream flow assessment requirement for the fisheries resource is the Oregon Water Resources Commission's approved waterway flows for recreation, fish, and wildlife uses. In a low water year, the requirement for fisheries is the flow as identified in flow release plans approved by the United States Army Corps of Engineers through the Rogue River Basin Water Management Advisory Group.

## **Instream Flow Assessment for the Outstandingly Remarkable Value of Recreation Opportunities**

The monthly summer flows at the time of the passage of the Wild and Scenic Rivers Act and prior to the construction of the Lost Creek and Applegate reservoirs averaged 1,000 cfs at Grants Pass, Oregon. In general, this minimum summer flow meets the downstream needs of recreationists.

**Supplemental Information** - The minimum summer flow meets the needs of recreationists in the Hellgate Recreation Area (i.e., at a minimum, summer inflows to the reservoirs being released as outflows). This minimum flow restricts motorized tour boat traffic from using the Dunn Reach. This was the historical condition at the time the Wild and Scenic Act was passed in 1966 and through 1977 before summer flows were augmented by water releases from the dams.

## **Interpretation**

An interpretive program will assist in the accomplishment of management objectives. The information and education facets of the interpretation program will in particular:

Help the river visitor enjoy a safe and rewarding experience.



Increase visitor awareness regarding natural, cultural, and historic resources of the area.

Develop and maintain rapport among BLM, other involved agencies, and the public.

Develop a system for on-the-ground identification of public lands.

Facilitate recreational use of the corridor and assist visitor management.

**Supplemental Information** - The Rogue River is rich in history and natural features. There is a tremendous opportunity to identify these features and interpret them for the education and enjoyment of the public.

An interpretive program will make public outreach effective for information and interpretation for recreation users of the river.

## **Land Tenure Adjustments and Acquisition of Lands or Interest in Lands**

All of the BLM lands within the river corridor are in RMP land tenure zone 1 and will be retained in public ownership (RMP/ROD p.81).

On land that remains in private ownership, compliance with some of the management directions will be accomplished through acquisition of scenic easements.

**Supplemental Information** - The term scenic easement means purchase of the right to control the use of land (including the air space above such land) for the purpose of protecting the scenic view from the river. Such control shall not affect, without the owner's consent, any regular use exercised prior to the acquisition of the easement.

Scenic easements will be sought to protect the natural environment or setting. Easements will consider protection of the view from the river or its environs as well as protection of critical resources.

Scenic easements will be written so that improvement or alteration of the property or change in land use that may impair the scenic quality or basic resource will require review and approval before such activity may begin. Conforming and nonconforming uses of land are covered in this plan in a general way. Specific application of these guides will necessarily be determined on a case-by-case basis.

Where a scenic easement for a parcel of private land is needed, an attempt will be made to negotiate an easement for the parcel within the river boundary.

Acquisition of fee title will be considered on any parcel of land that becomes available if it is in the public interest to do so.

While there is a need and the terrain is suitable, an easement for public access along the bank of the river will be acquired.

Fee acquisition will not be considered essential, but may be desirable in some instances.

Scenic easements will recognize the existence of more human-made modifications. Easements will be sought if there is a need to control uses that conflict with the basic resource.

## **Lands**

There are policies for the management of the public lands and interests (i.e., BLM scenic easements) owned on nonpublic lands.



**Supplemental Information** - The Federal Land Policy and Management Act (1976) is BLM's primary law pertaining to various land use authorizations. However, previous laws allowed other land uses within the river corridor. All land policies would be tailored to protect and manage the river's ORVs.

Types of land use authorizations and management authorities include:

- Right-of-way grants.
- Land use permits.
- Land use leases.
- R&PP leases and patents.
- Residential occupancies.
- Unauthorized uses.
- Land disposals.
- Land withdrawals.
- Acquired lands.

Right-of-way grants may be issued for the construction, use, and maintenance of roads, pipelines, powerlines, reservoirs, telephone lines, communication sites, etc. Land use permits are short term (three years or less) authorizations and are for uses that cause little or no environmental damage to the public lands and involve little or no improvements or financial commitments. Land use leases may be authorized allowing the long-term lease of public lands for habitation, cultivation, and use for trade and/or manufacturing sites. These leases are issued for uses that cause some surface disturbance and may cause environmental impacts to the public lands. They involve improvements to the land and considerable financial commitments.

The Recreation and Public Purposes Act is another law that authorizes the leasing and patenting (deeding) of public lands to nonprofit groups and governmental agencies. The Act authorizes the BLM to lease and/or convey public lands for recreational and public purposes under certain conditions.

Unauthorized uses of the public lands occasionally occur as a result of encroachment of private landowners adjacent to the public lands. Actions taken in the resolution of trespass cases include: collection of damages, removal of improvements from the lands, issuance of citations, or authorization of the activity by a land use authorization.

The disposal of public lands through direct sale and through land exchanges can be authorized.

Lands can be withdrawn from mineral development if the river's outstandingly remarkable values would be degraded. Withdrawals close the lands to mineral entry under the locatable mineral laws; however, the lands would remain open under the mineral leasing laws. Acquired status lands are closed to mineral entry.

## **Mining, Minerals and Energy Resources**

Subject to existing regulations, such as 43 CFR 3809, and any future regulations the Secretary of the Interior may prescribe to protect values of rivers included in the National Wild and Scenic Rivers System, existing operations, or new operations are allowed to continue on existing mining claims and new mining claims located in areas not currently withdrawn.

**Supplemental Information** - Most BLM-administered lands within the Hellgate Recreation Area are closed to locatable mineral entry. Those lands open to mineral entry are subject to surface management restrictions as defined by the 3809 regulations. A plan of operations for any mining activity would be required.

A withdrawal from mineral entry would be pursued for that portion of the recreation section of the Rogue River downstream from Yew Wood Creek to Grave Creek to conform with other segments of the designated river section and to conform with the existing management plan.



All mineral activity on BLM-administered land must be conducted in a manner that minimizes surface disturbance, water sedimentation and pollution, and visual impairment. Reasonable mining claim and mineral lease access will be permitted.

Digging, scraping, disturbing, or removing natural land features for the purpose of mineral prospecting or mining is allowed for: (1) valid existing mining rights, (2) recreational gold panning that does not require digging into the bank, or (3) the use in accordance with State law and regulations up to a four-inch diameter motorized suction dredge in the river channel. Suction dredges are restricted to operations below water level and within existing banks.

**Supplemental Information** - All prospecting, mineral exploration or production on valid mining claims will be reviewed to determine if it can occur without impacting the values established by the Wild and Scenic Rivers Act.

The validity of all mining claims will be determined by BLM.

Access routes to mining claims will be judged on the basis of minimum adverse affect on values of the river area.

Mining or associated operations contributing amounts of noise, smoke, dust or other elements detrimental to the river environment may be required to limit operations during peak recreation use periods each year.

Removal of mineral materials known as "common varieties" for commercial purposes from the riverbed or adjacent bars will not be allowed subject to valid existing rights. Before any gravels are disturbed, precautions must be taken to eliminate siltation.

Where existing material removal operations are adversely affecting recreational values on the river, purchase of the mining rights on these sites will be sought as rapidly as possible.

Acquisition of scenic easements for remaining undeveloped deposits on private lands will be pursued.

### **Salable Minerals, Leasable Minerals and Energy**

The BLM managed portions of the river corridor are available to mineral and energy leasing only with a no surface occupancy stipulation. There are no current leases in the corridor. Oil and gas potential is moderate to high. Geothermal resources material is low (RMP/FEIS/ROD 1995).

### **Motorized Travel**

Motorized travel on land would generally be permitted on existing roads. Controls would usually be similar to that of surrounding lands. Multiple-use trails, including motorized, may be developed on a case-by-case basis as long as the river values are protected. Motorized travel on water will be in accordance with existing regulations or restrictions.

**Supplemental Information** - Motorized travel on the Rogue River is a traditional use in the Hellgate Recreation Area. Motorized boating is encouraged to the extent consistent with the protection of the river environment. Motorized boating may be regulated and distributed where necessary to protect and enhance the ORVs. It may also be regulated for safety reasons (e.g., restrictions at low water flows).

### **Natural Scenic Qualities**

The natural beauty and character of the river corridor will be protected, enhanced, and maintained through effective visitor and land use management.



**Supplemental Information** - Recognition of the Rogue River's outstanding scenery has been focal to descriptions of the river and its environment since European settlers first arrived in the valley. The first active management efforts to protect the river's scenic beauty began in 1958. The BLM and the United States Fish and Wildlife Service concurred through a cooperative agreement that the river and its immediate environment should receive a different and more sensitive type of management than the surrounding lands. As concern for the preservation of free-flowing rivers increased and the Wild and Scenic Rivers Act was passed in 1968, active and effective protection of the natural scenic qualities began in earnest. With the purchase of scenic easements on all private properties and establishment of restrictive management mandates on public land, the river and its scenic corridor received a level of protection necessary and adequate to preserve the Rogue River's famous beauty.

The BLM Scenic Easement Program maintains or even enhances the protection of this most important outstandingly remarkable value. Past and ongoing management methods are specifically designed to protect the wide array of aesthetic resources that make the Rogue River special.

The BLM-administered lands within the Hellgate Recreation Area of the Congressionally-designated Rogue Wild and Scenic River corridor is allocated to visual resource management Class I (for preservation of the existing character of landscapes).

### **Private Property**

Management actions would be taken to prevent, stop, or reverse any significant damage to private land and improvements resulting from public use.

### **Public Use and Access**

Recreation use including, but not limited to, hiking, fishing, camping, hunting, and boating is encouraged in recreational river areas to the extent consistent with the protection of the river environment. Public use and access may be regulated and distributed where necessary to protect and enhance the ORVs. Any new structures must meet established safety, universal access, and health standards, or in their absence, be free of any recognized hazard.

Camping and picnicking opportunities will be provided that range from primitive undeveloped sites to highly developed facilities. There is a 14-day camping limit unless otherwise allocated or posted.

**Supplemental Information** - Camping is an activity that can have significant physical impacts on the natural environment when allowed outside of developed areas. Additional social impacts can arise when camping occurs on small parcels of public land adjacent to private property. Recreationists can unknowingly trespass on adjacent private lands when an intermixed ownership pattern exists. Trespass in this situation often results in an increased fire danger, accumulated litter, and vandalism to private property. To alleviate some of these problems, areas may be designated as "access only" or "day-use only."

Due to the high percentage of private property in the Hellgate Recreation Area, especially upstream of Hellgate Canyon, camping will be restricted to developed campgrounds and certain BLM-administered lands.

Jumping, falling, rappelling, dangling, throwing or causing or assisting any object, person or animal to jump, fall, rappel, dangle or be thrown from Grave Creek Bridge or Hellgate Bridge are prohibited. Occupancy of any portion of the above bridges, other than the roadway or pedestrian footpaths located on these bridges, is prohibited. Bridges are closed to uses other than that for which they are designated.



## Recreation

The management plan for a river would evaluate current and potential recreational use, and if appropriate, identify a maximum carrying capacity for recreational boating use. The implementation of permit systems, other than permits for commercial (i.e., outfitters and guides) use of federal lands and related waters, is typically undertaken only when public use approaches the identified maximum carrying capacity.

**Supplemental Information** - One of the key reasons for including the Rogue River in the National Wild and Scenic Rivers System was to protect and enhance the recreational values the river possesses. These values are realized in a great variety of activities. They range from an individual pitting only his knowledge and skill against the sometimes hostile forces of nature to recreation uses where the facilities and equipment are so sophisticated that the river can be enjoyed with no special knowledge or skill.

- Consistent with the objectives of a recreational river classification, sufficient recreation facilities, on both private and federal land, would be developed to meet the needs of the recreationists. Use levels would not be allowed to reach the point where the quality of recreational experience or quality of the stream environment deteriorates.
- Since boating, fishing, and sightseeing are the main recreational uses on the river, top priority for recreation development would be given to improving the quality of these activities.
- Although 1969 levels of all types of boating activity created few problems, uncontrolled future use would probably result in safety hazards and a lowering of the quality of the recreation experience. When the need warrants, this would be prevented by the establishment of regulations limiting size, numbers, type, and speed to provide optimum boat use.
- Future technological advances may result in new types of equipment that could be used on the river. Only such types of equipment compatible with management objectives would be permitted.

## Recreation Facilities

Opportunities will be provided for engaging in a wide range of river-oriented recreation activities dependent on or enhanced by the free flowing nature of the river. Developed recreational facilities have a necessary and important role in supporting some of these recreation activities and, therefore, are essential in order to fulfill the objectives for which this area was designated.

Facilities that will accommodate a wide range of recreation activities dependent on the river environment will be located and developed with minimum adverse impact on the river resources.

Safe parking areas will be provided out of view from the river.

Safe access to and along selected segments of public land adjacent to the river with special consideration to seasonal use will be provided.

Except for launching ramps, facilities will not be built immediately adjacent to the river.

Special consideration will be given to develop facilities to accommodate the elderly and the handicapped. Every effort would be made to provide universal access.

Interpretive centers, administrative headquarters, campgrounds, and picnic areas may be established near the river.



Recreational needs and resource capabilities will be identified along with the necessary development of facilities consistent with the intent of the National Wild & Scenic Rivers Act.

## **Recreation Opportunity Spectrum**

Standard recreation opportunity spectrum classes for a river segment with a federal classification of recreational river is normally in the range from natural motorized river to urban river.

**Supplemental Information** - The recreation opportunity spectrum objectives for the Hellgate Recreation Area are primarily "modified natural motorized river." The following characterizations represent the desired future conditions for the experience opportunities.

- Naturalness - modified natural motorized river.
- Access - modified natural motorized river.
- Remoteness - modified natural motorized river.
- Social Encounters - rural river
- Visitor Management - modified natural motorized river.
- Facilities - modified natural motorized river.

## **Rights-of-Way**

New transmission lines, natural gas lines, and water lines, etc. are discouraged unless specifically authorized outright by other plans, orders, and laws. Where no reasonable alternate location exists, additional or new facilities should be restricted to existing rights-of-way. Where new rights-of-way are unavoidable, locations and construction techniques would be selected to minimize adverse effects on ORVs and fully evaluated during the site selection process.

## **Roads and Trails**

Existing parallel roads can be maintained on one or both riverbanks. There can be several bridge crossings and numerous river access points. Roads, trails, and visitor areas must conform to construction and maintenance standards and be designed to reduce safety hazards.

Trails within the river corridor would be managed to protect the ORVs. Designated trails would be designed, constructed, maintained, and managed to have minimum effect on other resource values, as well as provide for the safety of the visitor. Trails would be managed to provide access to a variety of recreational opportunities, including fishing, sightseeing, hiking, nature study, and camping.

A wide range of developed and dispersed recreation trail opportunities that contribute to meeting projected recreation demand within the planning area would be provided. Provision of recreation opportunities in or adjacent to water will be emphasized.

## **Scenic Easement Program**

A scenic easement is the right to control the use of a piece of private land, including the air space above such land, within the authorized boundaries of a component of the wild and scenic river system, for the purpose of protecting the natural qualities of a designated river area. Control shall not affect, without the owner's consent, any regular use exercised prior to the acquisition of the easement. Compliance with this management direction will be accomplished through the acquisition of scenic easements for land remaining in private ownership.

Additional standards are that structures that can be seen from the river will be of an attractive design and have sufficient topographic or vegetative screening to make them as inconspicuous as possible.



## Sound

Sound standards are based on the objectives of the recreational opportunity spectrum class being managed.

**Supplemental Information** - The key concept for the Hellgate Recreation Area is that sound can be managed at a range of recreation opportunity spectrum levels designed to protect and enhance existing recreational values. Visitors to the recreation section could experience a broad range of sounds from different sources. The river setting standards (i.e., recreation opportunity spectrum subclasses) range from modified natural motorized river to rural river. For example, the sounds of other visitors on the water could range from the sounds associated with a low to a high number of parties encountered at one time.

Water, shoreline, and roadside sound would be managed whenever and wherever it unreasonably degrades or affects the ORVs for which the river was designated or the quality of the recreation experience.

Sound from motorized travel is permitted on existing roads and would be controlled by management similar to that of the surrounding area. Sound from recreation motorized watercraft on the water would be managed in accordance with existing regulations or restrictions (e.g., Oregon State Marine Board rules for recreational watercraft). Sound from commercial motorized watercraft would be managed by BLM. No person shall operate a commercial motorized tour boat on the waters of the Hellgate Recreation Area that exceed a sound level as follows:

For engines manufactured before January 1, 1993, a maximum sound level of 90 decibels on the "A" scale when subjected to a stationary test as prescribed by the Society of Automotive Engineers J2005.

For engines manufactured after January 1, 1993, a maximum sound level of 88 decibels on the "A" scale when subjected to a stationary test as prescribed by Society of Automotive Engineers J2005.

Unreasonable noise is prohibited on all BLM-administered land and water. Considerable weight to opinions expressed by the public will be given to management of sound sources near sound sensitive areas.

## Transportation

Existing roads and bridges affect the quality of the landscape along the river.

Great care will be taken in the location and design of any future roads to assure they are not visible in a way that would detract from the river environment.

Construction of roads, trails, or tramways will be controlled on private land through scenic easements. Approval of construction will be determined on a case-by-case basis.

No additional airstrips or railroads will be permitted.

Helispots may be located only in locations out of view of the river, trail, or recreation sites and where they do not adversely affect the recreation experience.

There will be no additional bridges or cable crossing across the Rogue River.

Public use of the trail system, existing and proposed, will focus on providing hiker opportunities, but other types of trail use can be permitted (e.g., equestrian, motorized) as long as the river values are protected.



Roads and trails will be constructed to the minimum safe standard consistent with the intended use. Public roads will be treated to eliminate dust when deemed necessary.

New roads needed for developments will be permitted providing the design, location, and standards are such that the least impact on the environment is assured. Additional through roads paralleling the river will not be permitted.

Parking areas will be located out of sight of the river or recreation sites. Screening will be provided if necessary. If there is any other suitable nearby place to park, parking will not be permitted on the gravel bars in view of the river. Where there is no suitable alternative, vehicles will be parked where they are least conspicuous.

## **Universal Access**

Universal access provides outdoor recreation opportunities to all visitors irrespective of age or ability (i.e., mental, physical, or sensory). The concept of providing access to visitors with varying mental abilities includes considering cultural diversity. For example, providing information to non-English speaking visitors and addressing visitors varied learning styles. The integration of universal access design in all outdoor recreation facilities and programs ensures that people of all ages and abilities have access to the widest range of recreation opportunities. The goal is to provide all visitors choices from highly developed to primitive settings while protecting the ORVs (e.g., maintaining the integrity of the natural environment).

It is not necessary or desirable to develop all recreation settings equally. As the level of development and modification decreases along the spectrum from urban/rural to primitive, expectations of comfort, security, and accommodation for accessibility are also expected to diminish, while expectations of rusticity, challenge, and risk increase.

## **Utilities**

With a few exceptions, existing utility development along the river has had little adverse affect on recreational and scenic values. However, construction of additional developments and expansion of existing ones will increase the need for additional utilities. Construction of new utilities will be done in such a way that the scenic and recreational values are not degraded.

Try to locate all new utility lines out of view of the river or its environs. Where this is not possible, the visual impact will be reduced by use of screening, color nonreflective hardware and conductors, and treatment of the new utility corridor.

Reduction of visual impact of exiting lines should be encouraged.

Where feasible, utility lines will be buried.

Power-generating equipment will be located and designed so that it cannot be seen or heard from the river.

If possible, existing and proposed utility lines will be grouped and aerial crossings of the river are reduced. The possibility of attaching new utility lines to bridges should be investigated.

Where necessary for protection of the scenic quality of the river front, scenic easement purchase of the right to construct utilities visible or audible from the river will be undertaken. This includes power generating equipment.

## **Water and Soil**

Water and soil are the two basic elements that make a river and its banks. The condition of both is important in that they affect all the other uses and activities in the area. The following



management direction is aimed at maintaining or improving the condition of the soil, water, and watershed.

Scenic easements on critical soil areas of privately-owned lands have been acquired to protect those areas exhibiting clear and present potential for deterioration if disturbed or where serious deterioration occurs.

Stabilize or revegetate all areas of exposed soils caused by human activities. Place special emphasis on preventing and controlling soil erosion near the water's edge.

Alteration of the stream flow and vegetation manipulation will be limited to that necessary to maintain safe navigation and be consistent with laws and regulations imposed by the state of Oregon through the authority of the Oregon Division of State Lands.

Modification of bedrock will not be permitted.

Allow no surface dumping of garbage or other potential pollutants. Waste material must be disposed of in a manner that does not contaminate ground or surface water.

Sewage disposal systems must meet or exceed the State of Oregon and local government sanitation requirements.

## **Water Rights**

In the process of evaluating river segments, authorized officials are held to established principles of law with respect to water rights.

**Supplemental Information** - Under the provisions of Section 13 of the Act, as well as other statutes, river studies should not interfere with existing rights (except for licenses under Section 7(b) of the Act, pertaining to Section 5(a) river studies including the right of access with respect to the beds of navigable streams, tributaries, or river segments. In addition, under the Federal Land Policy and Management Act and the Federal Power Act, the BLM has conditional authority to control any proposed projects that would be incompatible or potentially degrading to river and/or other identified resource values.

## **Watchable Wildlife Areas**

Protection and maintenance of the primary habitats would be the priority on those areas designated as watchable wildlife sites. Other activities proposed in the watchable wildlife sites would be analyzed to determine compatibility with the priority uses in these areas.

**Supplemental Information** - There are three existing watchable wildlife areas designated on the recreational section of the Rogue River, these are Whitehorse Park, Hog Creek Landing, and Hellgate Overlook. Whitehorse Park's primary habitat is river riparian and ponds. It was designated as a bird viewing area where visitors can expect to see neotropical migrants, resident birds, raptors, and waterfowl. Hog Creek Landing was designated primarily for rock habitat at the mouth Hellgate Canyon; viewers can expect to see species associated with rock habitat such as raptors and cliff swallows. The Hog Creek site also offers the viewers riparian and river habitat where they can expect to see waterfowl, shore birds, and river otter. Hellgate Overlook was also designated for the rock habitat and the unique viewing offered by the site on top of the canyon.

Flanagan Slough and Griffin Park/Griffin Land Complex have been recommended for inclusion to the watchable wildlife sites on the recreational section of the river. Flanagan Slough offers upland, riparian, and river habitats inhabited by neotropical and resident birds, waterfowl, shore birds, raptors, pond turtles, and river otter. Griffin Lane provides a pine oak upland habitat that is associated with a county park. This habitat offers the viewer an opportunity to see neotropical and resident birds, small mammals, and osprey.



## Wildlife

Protect wildlife species considered to be threatened or endangered.

Provide the maximum number of wildlife sightings along the river and trails.

Allow natural succession to continue on the majority of the lands along the river that are vegetated with either mixed conifer forest or riparian vegetation.

Convert agricultural vegetation species on acquired lands to species that would provide better habitat for wildlife.

**Supplemental Information** - The Rogue National Wild and Scenic River Wildlife Management Plan was prepared in 1980 as a result of a decision in the 1978 Hellgate Recreation Area Management Plan. Lands managed by the BLM along the Rogue River from the confluence of the Applegate River to the confluence of Grave Creek were inventoried for habitat type and condition. Data resulting from that inventory were used to develop management strategies for those lands. The majority of the lands along the river were vegetated with either mixed conifer forest or riparian vegetation that changes very slowly through time. Management recommendations for those lands was to monitor them and allow natural succession to continue. Other lands, especially those above Hog Creek, that were purchased to protect the river corridor were home sites and agricultural lands.

Management suggestion for much of these lands was to convert them from agricultural vegetation to vegetation species that would provide better habitat for wildlife. The majority of the projects proposed in the management plan were completed in the early 1980s. Examples of a few of these projects are: the conversion of a peach orchard to grassland, disking and seeding of old hay fields to grasses better suited for dry habitats, installation of bird boxes, and closure of roads to improve wildlife habitats.

After completion of most of the proposed projects, the area has been monitored to determine the condition and trend of the habitats. After the initial plantings, most of the project areas have been allowed to return to more natural processes. Management of roads, recreation areas, and other uses have and will continue to be consistent with the existing wildlife habitat management plan.

Projects such as the peach orchard and the hay fields near Robertson's Bridge have been invaded with blackberries, pine seedlings, hardwoods, and brush species. Although many of the species that have become established in these areas are not native, they do provide a valuable contribution to the habitat components of this riparian habitat area. Species like the Himalayan blackberry, which is a non-native, aggressive invader, has displaced native species of grass, forbs, and shrubs. Blackberries may become a significant problem in the future if they continue to encroach and overtake the open grassland areas. Open grasslands provide habitat for many species of sparrows, small mammals, and reptiles. If the invasion of blackberries continues in these habitats, some type of control may be necessary. Blackberries do, however, provide excellent cover and an abundant food source for many other wildlife species.







# Appendix D

## Resource Activities and Land Uses

### Josephine County Zones

#### Farm (Exclusive Farm and Farm Resource Zones)

Land within the Farm Zone is designated for agricultural use, including crop production, livestock raising, and other farm-related activities. The zone is located in the central and eastern portions of Josephine County, Oregon. The zone is bounded by the Oregon-California border to the east, the Oregon-Arizona border to the south, and the Oregon-Washington border to the north. The zone is also bounded by the Oregon-Idaho border to the west. The purpose of the zone is to protect the agricultural resources of the county and to provide a stable environment for farming activities. The primary use of the zone is for crop production, including wheat, corn, and soybeans. Other uses include livestock raising, including cattle and horses, and other farm-related activities, including processing and marketing of agricultural products. All activities within the zone must comply with the following requirements:

1. The use will not have a significant impact on the agricultural resources of the zone.
2. The use will not significantly impact the ability of the zone to produce agricultural products.
3. In addition, a written agreement will be entered into with the local agricultural community, with the intent of protecting and improving the agricultural resources of the zone, and the agricultural community will be consulted on any proposed changes to the zone.

The zone is located in the central and eastern portions of Josephine County, Oregon. The zone is bounded by the Oregon-California border to the east, the Oregon-Arizona border to the south, and the Oregon-Washington border to the north. The zone is also bounded by the Oregon-Idaho border to the west. The purpose of the zone is to protect the agricultural resources of the county and to provide a stable environment for farming activities. The primary use of the zone is for crop production, including wheat, corn, and soybeans. Other uses include livestock raising, including cattle and horses, and other farm-related activities, including processing and marketing of agricultural products. All activities within the zone must comply with the following requirements:

The zone is located in the central and eastern portions of Josephine County, Oregon. The zone is bounded by the Oregon-California border to the east, the Oregon-Arizona border to the south, and the Oregon-Washington border to the north. The zone is also bounded by the Oregon-Idaho border to the west. The purpose of the zone is to protect the agricultural resources of the county and to provide a stable environment for farming activities. The primary use of the zone is for crop production, including wheat, corn, and soybeans. Other uses include livestock raising, including cattle and horses, and other farm-related activities, including processing and marketing of agricultural products. All activities within the zone must comply with the following requirements:

#### Forest (Forest Commercial and Woodlot Resource Zones)

Land within the Forest Zone is designated for forest-related activities, including logging, timber production, and other forest-related activities. The zone is located in the western portions of Josephine County, Oregon. The zone is bounded by the Oregon-California border to the east, the Oregon-Arizona border to the south, and the Oregon-Washington border to the north. The zone is also bounded by the Oregon-Idaho border to the west. The purpose of the zone is to protect the forest resources of the county and to provide a stable environment for forest-related activities. The primary use of the zone is for logging and timber production. Other uses include forest-related activities, including forest management, forest conservation, and forest recreation. All activities within the zone must comply with the following requirements:

1. The use will not have a significant impact on the forest resources of the zone.
2. The use will not significantly impact the ability of the zone to produce forest products.



# Appendix D Resource Activities and Land Uses



Zoning is a reflection of Josephine County's comprehensive plan. The county has zoning that allows residences as a permitted use on private nonresource lands (rural residential) and zoning that allows residences as a conditional use on private resource lands (farm zones, forest commercial, woodlot resource). Residences as conditional uses must be compatible with, and not interfere with, activities on resource lands.

The following is generalized for the Hellgate Recreation Area and nearby areas outside the recreation area.

## **Josephine County Zones**

### **Farm (Exclusive Farm and Farm Resource Zones)**

Land within the farm zones is regulated under statewide planning Goal 3, which protects agriculture in Oregon. The uses allowed in the farm zones are set by Oregon Revised Statutes (ORS), Chapter 215 and Oregon Administrative Rules (OAR), Chapter 660, Division 33. Josephine County is mandated to implement state laws and does not have the authority to deviate from them. The purpose of the zones is to protect the land for resource use. The primary uses in the zones are farming and forestry. Residential uses may be allowed under certain circumstances as may other nonfarm uses. All nonfarm uses must meet the following criteria:

1. The use will not force a significant change in accepted farm or forest practices on surrounding lands devoted to farm or forest use.
2. The use will not significantly increase the cost of accepted farm or forest practices on surrounding lands devoted to farm or forest use.
3. In addition, a written statement will be recorded with the deed which recognizes both the rights of adjacent and nearby land owners to conduct farm operations and that agricultural and forest uses for lands zoned for resource use have priority over all land uses.

The minimum lot size in both zones is 80 acres, though smaller lots may be approved in conjunction with an approval for a nonfarm use. Farming practices may be restricted within the corridor to the extent that they would disturb riparian vegetation along the river. The scenic easements may control how farming is conducted.

The land from Griffin Park to Grave Creek has little viable farm land with the majority being woodlots or forest commercial in character. The stretch from the confluence of the Applegate and Rogue to Griffin Park has some pockets of intensive and productive farm land.

### **Forest (Forest Commercial and Woodlot Resource Zones)**

Land within the forest zones is regulated under statewide planning Goal 4, which protects forestry in Oregon. The uses allowed in the forest zones are set by ORS, Chapter 215 and OAR, Chapter 660, Division 6. Josephine County is mandated to implement state laws and does not have the authority to deviate from them. The purpose of the zones is to protect the land for resource use. The primary uses in the zones are farming and forestry. Residential uses may be allowed under certain circumstances as may other nonforest uses. All nonforest uses must meet the following criteria:

1. The proposed use will not significantly increase fire hazard or significantly increase fire suppression costs or significantly increase risks to fire suppression personnel.
2. The use will not significantly increase the cost of accepted farm or forest practices on surrounding lands devoted to farm or forest use.



3. The use will not force a significant change in accepted farm or forest practices on surrounding lands devoted to farm or forest use.
4. In addition, a written statement will be recorded with the deed which recognizes both the rights of adjacent and nearby land owners to conduct forest operations consistent with the Forest Practices Act and that agricultural and forest uses on lands zoned for resource use have priority over all other land uses.

The minimum lot size in both zones is 80 acres, though smaller lots may be approved in conjunction with an approval for a nonforest use. Some of the uses specifically allowed in both zones may be restricted under the scenic easement program. The BLM restricts the right to conduct forest practices and manages the corridor consistent with the principals of the National Wild & Scenic River designation.

The BLM administers 5,242 acres of land in the Hellgate Recreation Area. Two-thousand one-hundred and seventy (2,170) acres, or 41 percent, of this public ownership is classified as land suitable for timber production. Fifty-nine percent, or 3,072 acres, is classified as unsuitable (poor soils, too rocky, or nonforest). All timberland, both suitable and unsuitable, is allocated to wild and scenic river use.

## **Rural Residential**

Land within the rural residential zone is land that is not considered farm or forest land. Land is placed in this zone because an exception to Goals 3 and 4 for residential purposes has been made by the Land Conservation and Development Commission (LCDC). The primary use of the zone is for homes. There are three density standards: RR-1, rural residential zone with a 1 acre minimum lot size; RR-2.5, rural residential zone with a 2.5 acre minimum lot size; and RR-5, rural residential zone with a 5 acre minimum lot size. Uses that compliment the residential nature of the zone are allowed including home-based businesses, kennels, play grounds, recreational facilities, churches, and schools. Some other uses may be allowed, subject to approval criteria, including landfills, a water reservoir, mining, and processing of aggregate. Multiple dwellings on a single lot are not allowed. All of the uses allowed within this zone are subject to the restrictions in any applicable scenic easement.

## **Tourist Commercial**

Four areas are zoned for tourist commercial: the Galice Store and Resort, the OK Corral, Morrison's Lodge, and Rogue Glen Lodge.

The purpose of this zone is to allow the development of services intended to aid the traveling public. It is a zone that encourages tourist-oriented facilities, including lodging, food service, retail shops, and recreational facilities. Dwellings are allowed in conjunction with a commercial use. Land placed in this zone is land not considered farm or forest land. Land is placed in this zone because an exception to Goals 3 and 4 for commercial uses has been made by the Land Conservation and Development Commission (LCDC).

## **Wild and Scenic River**

The wild and scenic river overlay is a zone that is placed on a lot or parcel of land in addition to existing zoning. It supplements or adds additional restrictions based on a particular characteristic. The overlay zone does not replace and cannot override any restrictions placed on a parcel by the underlying zoning or the scenic easements the BLM holds. The content of the overlay is essentially the same as was developed when Josephine County's comprehensive plan was acknowledged by LCDC in 1985. It requires notice and approval by the BLM of any proposed land use before Josephine County can issue the development permit necessary to begin construction.



## Goal 5 Resources

Goal 5 is a statewide planning goal designed to protect open spaces, scenic and historic areas, and natural resources. Goal 5 requires local governments to identify potential resources, determine if a resource site is significant or important and if so, protect the resource. There are 12 resources currently protected under Goal 5:

1. Land needed or desirable for open space.
2. Mineral and aggregate resources.
3. Energy sources.
4. Fish and wildlife areas and habitat.
5. Ecologically and scientifically significant natural areas.
6. Outstanding scenic views and sites.
7. Water areas, wetlands, watersheds and groundwater resources.
8. Wilderness areas.
9. Historic areas, sites, structures and objects.
10. Cultural areas.
11. Potential and approved Oregon recreational trails.
12. Potential and approved federal wild and scenic waterways and state scenic waterways.

Josephine County has a fairly complete inventory of significant Goal 5 resources in the planning area. Potential Goal 5 resources were identified. Josephine County may complete the Goal 5 process on these sites. Since the sites are on federal land or located on land controlled by BLM scenic easements, the protection of the sites by Josephine County will be deferred to BLM.

## Utilities

The placement of utilities in the Hellgate Recreation Area is governed by three primary factors: the actual carrying capacity of the land for sewage disposal and groundwater availability, restrictions by BLM scenic easements, and land use regulations.

Electricity is available along the river corridor. Existing developments are served by wells for groundwater and septic systems for sewage treatment. New residential development requires at least one acre for installing a septic system and drilling a well. Septic system installation is regulated by the Oregon Department of Environmental Quality and well drilling is regulated by the County Watermaster and Article 84 of the Rural Land Development Code. Installation of a community water or sewer system may require an exception to statewide planning goals 11 and 14. This is a difficult process that serves to deter construction of community systems unless there is a public health hazard, which must be abated.

## Rural Residential and Tourist Commercial

Josephine County rural residential and tourist commercial zones and the State of Oregon's river community classification are analyzed and mapped by six river segments that generally reflect the Hellgate Recreation Area as broken up by boat ramps.

### Whitehorse Park to Matson Park

The river segment from Whitehorse Park to Matson Park has no tourist commercial or rural residential zoning, or river communities within the Hellgate Recreation Area. There are a few areas zoned rural residential located outside the Hellgate Recreation Area corridor boundaries. The area is primarily zoned for farming and is mostly in private ownership. The stretch from the confluence of the Applegate and the Rogue to Griffin Park has some pockets of intensive and productive farm land. There are some major riparian buffers (cottonwoods and willows) between the view visitors have from the river and agricultural activities.



## **Matson Park to Robertson Bridge**

The river segment from Matson Park to Robertson Bridge has an extensive amount of land zoned rural residential both within the Hellgate Recreation Area and adjacent to it. Three of the seven river communities are located there (Peaceful Valley Acres Subdivision, Ferry Park Estates, and Burnette Estates Subdivision). Two additional river communities (Rogue Riffle Subdivision and Cathcart) are located north of Robertson Bridge. The land from Griffin Park to Grave Creek has little viable farm land with the majority being woodlots or forest. The majority of the land is in private ownership.

## **Robertson Bridge to Hog Creek**

The river segment from Robertson Bridge to Hog Creek has an extensive amount of land zoned rural residential both within the Hellgate Recreation Area and adjacent to it. Three of the six river communities are located there (Rogue Riffle Subdivision, Cathcart, and Green Tree Subdivision). A tourist commercial zone is found at the OK Corral. In addition, two parcels of land (OK Corral and Double Tree Ranch) have BLM scenic easements that allow docks and commercial use. The majority of the land is in private ownership.

## **Hog Creek to Ennis Riffle**

The river segment from Hog Creek to Ennis Riffle has one small area identified for rural residential use within the corridor near Hog Creek and some more acreage zoned rural residential adjacent and to the east. There are no areas classified as river communities. The Morrison's Lodge area is zoned for tourist commercial. The Morrison's Lodge also has a BLM scenic easement that could allow an increase in commercial activity. The vast majority of the land in this stretch is managed by Josephine County or the BLM.

## **Ennis Riffle to Rand**

The river segment from Ennis Riffle to Rand has two areas zoned for tourist commercial (Rogue Glen Lodge and the Galice Store and Resort). One small rural residential zone is identified around the Rogue Glen Lodge.

The Galice Subdivision is the last river community identified by the Oregon State Parks and Recreation Department. This river community and rural residential area has a substantial amount of commercial activity that occurs in the form of home-based businesses (outfitter and guiding services, shuttle services, raft and equipment rentals). The vast majority of land in this river segment is in local, state, or federal administration.

## **Rand to Grave Creek**

The river segment from Rand to Grave Creek has no land zoned tourist commercial, rural residential, or classified as a river community. Almost all the land is under local or federal administration.

## **People/Residences**

People and residences correlate with the Josephine County zone for rural residential and the State of Oregon's river community classification.

An assumption is that the number of residences or potential residences near BLM-administered wild and scenic rivers can be used as a measure of the degree of potential conflict between residents and river users. Low density populations are less likely than high density populations to object to river use activities. It was further assumed that lands zoned farm, forest, and woodlot do



not generally support the population density associated with conflicts over nearby visitor use. These zones generally have minimum sizes of greater than 20 acres for new parcels.

An analysis conducted by the BLM in the late 1970s concluded that as a result of scenic easement and fee acquisitions, the objectives of the Wild and Scenic Rivers Act and the housing densities for the recreational area described in the 1972 joint management plan were met (USDA and USDI 1972). The analysis was limited to housing densities per river mile within the corridor boundaries of the Hellgate Recreation Area (see Table 3-9). Not surprisingly, residence occurrence corresponds with private ownership, residential zoning, and river community classifications.

Housing densities continue to increase in the areas zoned rural residential and river community.







# Appendix E

## Recreation Opportunity Spectrum Inventory

The ROP Inventory was designed and developed by the BLM to provide a systematic and consistent way to identify and inventory recreation opportunities within the public lands. The goal of the inventory is to provide a systematic and consistent way to identify and inventory recreation opportunities within the public lands. The ROP Inventory was designed and developed by the BLM to provide a systematic and consistent way to identify and inventory recreation opportunities within the public lands.

There are three types of recreation opportunities that can be provided: (1) the opportunity to enjoy the natural resources, (2) the opportunity to enjoy the cultural resources, and (3) the opportunity to enjoy the historical resources. The ROP Inventory was designed and developed by the BLM to provide a systematic and consistent way to identify and inventory recreation opportunities within the public lands.

### Recreation Opportunity Classes

There are six recreation opportunity classes that are used to identify and inventory recreation opportunities within the public lands. These classes are: (1) the opportunity to enjoy the natural resources, (2) the opportunity to enjoy the cultural resources, (3) the opportunity to enjoy the historical resources, (4) the opportunity to enjoy the scenic resources, (5) the opportunity to enjoy the recreational resources, and (6) the opportunity to enjoy the educational resources.

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# Appendix E Recreation Opportunity Spectrum Inventory



Recreation on public lands administered by the BLM is more than just camping, fishing, hiking, and rafting. Research has shown that people choose a specific setting for each of these activities in order to realize a desired set of experiences. For example, camping in a large undeveloped setting with difficult access and few facilities offers a sense of solitude, challenge, and self-reliance. In contrast, camping in a setting with easy access and highly developed facilities offers more comfort, security, and social opportunities.

Recreation opportunity spectrum (ROS) classes are the basic framework for inventory, planning (descriptions and prescriptions), and managing (prescriptions) the recreation resource. Opportunity classes define the physical, social, and managerial conditions considered desirable and appropriate within the area (Hendee et al. 1990). A recreation opportunity is the availability of a choice for a user to participate in a preferred activity within a preferred setting (recreation opportunity class) in order to realize those satisfying experiences that are desired (USDA, USFS 1982).

The ROS helps the manager and users to focus on the recreation product (goal) rather than the means (activities). The goal of the recreationist is to have satisfying experiences and the goal of the BLM is to provide opportunities for these experiences. The ROS recognizes that the factors that make up a satisfying experience vary from person to person and that there is need for a variety of opportunities to satisfy differing experience expectations.

There are three types of settings that influence the type of experience opportunities that can be provided: (1) the physical setting, which is indicated by topography, vegetation, water, wildlife, roads, trails, and other human improvements; (2) the social setting, which includes the number and types of interactions among people; and (3) the managerial setting, which includes those actions taken to restrict or control visitor use, such as signs, facilities, barriers, regulations, and presence of law enforcement officials.

## Recreation Opportunity Classes

There are six standard ROS classes: primitive, semiprimitive nonmotorized, semiprimitive motorized, roaded natural, rural, and urban (see Table App-E-1).

Nine ROS subclasses were established from the six standard ROS classes. The subclasses reflect local conditions and clarify the recreational experience. Five of these subclasses (primitive, semiprimitive nonmotorized, semiprimitive nonmotorized developed, semiprimitive motorized, and semiprimitive natural) are usually associated with wild and scenic river classifications (see Table App-E-1) (Klein 1992; Klein 1993). These five subclasses are at the spectrum end of solitude, risk taking, and self-reliance. Four subclasses (modified natural nonmotorized, modified natural motorized, rural, and urban) are usually associated with recreational river classifications, especially the modified natural motorized and rural classifications. These four subclasses are at the spectrum end of socializing, comfort, and security.

## Recreation Opportunity Spectrum Inventory

Approximately 5,400 acres of BLM-administered lands within the Hellgate Recreation Area were inventoried for their recreation opportunities (Klein 1992). These lands represent approximately 70 percent of the total land ownership within the planning area (see Table 1-1). The inventory identified that the BLM-administered lands within the planning area have characteristics of three ROS subclasses: modified natural motorized river, semiprimitive nonmotorized river, and rural river (see Tables App-E-2, 3 & 4).

**Modified Natural Motorized River.** This was the largest inventoried subclass (2,750 acres). The majority of the visitors enjoy this subclass. There is about an equal chance to experience affiliation with other user groups and for isolation from the sights and sounds from humans. The



inventory was a reflection of paved roads, moderate to high contact with visitors on the roads and river, and the presence of structures and modified settings outside of the major travel routes.

**Semiprimitive Nonmotorized River.** This was the second largest subclass inventoried (2,475 acres). This was unusual in that this ROS subclass is not normally associated with a Federal river classification of recreational. This subclass provides a high opportunity for experiencing isolation from the sights and sounds of humans. Only a small amount of the visitors actually experienced this recreational opportunity as it reflected lands without roads or lands with closed roads. In addition, structures are rare, there is little contact between visitors, and few managerial controls are present. These lands are away from the river and open roads and are not accessible by motorized vehicle. The means of experiencing the recreational opportunity is by hiking/walking.

**Rural River.** This was the smallest subclass inventoried (275 acres). These lands were classified rural because of concentrations of visitors, structures, and managerial controls. These lands were represented by the Rand Administrative site and several developed day-use sites (Whitehorse, Hellgate, Rainbow, Carpenter's Island, Chair, Rand, and Argo).

## Area and Seasons of Inventory

The ROS inventory included all lands, both public and private, within the Hellgate Recreation Area (see Map 1-1 and Table 1-1) (Klein 1992).

Four peak visitor use seasons were identified based on a 1991 visitor use inventory (see Table App-E-5) (Austermuehle 1992; Austermuehle, Walker and Littlefield 1995). Day use is concentrated in the warm summer months from May through September. Ninety-eight percent of the visitor use by motorized boat occurred during the current motorized tour boat (MTB) season of use from May 1 through September 30. The nonmotorized boat angling season of use occurred primarily in the Applegate Reach from mid-January through mid-April and August 15 through the end of October. The nonmotorized float boating occurred primarily in the Dunn Reach from June 1 through September 30.

These four seasons of use were combined into two visitor use seasons, a primary visitor use season and a secondary visitor use season (see Table App-E-6). Summer is the primary visitor use season. It is principally a function of warm weather water-related activities and large numbers of visitors and watercraft from May 1 through September 31. The secondary visitor use season is the rest of the year from October 1 through April 30. The secondary visitor use season has two major parts that are a function of fishing activity. One part of the season is from mid-January through mid-April over the entire Hellgate Recreation Area; the other part of the season is the month of October below Hog Creek (Dunn Reach) (see Table App-E-5).



**Appendix E-1. Relationships of Recreation Opportunity Spectrum Classes and National Wild and Scenic River Classifications for the Hellgate Recreation Area**

Standard Recreation Opportunity (ROS) Classes								
Primitive	Semiprimitive Nonmotorized		Semiprimitive Motorized		Roaded Natural	Rural	Urban	
ROS Subclasses For Rogue River								
Primitive River	Semiprimitive Nonmotorized River	Semiprimitive Nonmotorized Developed River	Semiprimitive Motorized River	Semiprimitive Natural River	Modified Natural Nonmotorized River	Modified Natural Motorized River	Rural River	Urban River
P River	SPNM River	SPNMD River	SPM River	SPN River	MNNM River	MNM River	R River	U River



## Appendix E-2. Recreation Opportunity Spectrum for the Hellgate Recreation Area -Activity Characterization

### Semiprimitive Nonmotorized River

#### Land Based:

Viewing scenery  
Hiking and walking  
Horseback riding  
Camping  
Hunting  
Nature study  
Mountain climbing

#### Water Based:

Canoeing  
Rafting  
Drift boating  
Other watercraft (nonmotorized)  
Swimming  
Fishing

#### Snow and Ice Based:

Not applicable

### Modified Natural Motorized River

#### Land Based:

Viewing scenery  
Viewing activities  
Viewing works of human-kind  
Automobiles (includes off-road use)  
Motorcycle and scooter use  
Specialized landcraft use  
Bus touring  
Aircraft use  
Hiking and walking  
Bicycling  
Horseback riding  
Camping  
Picnicking  
Resort and commercial services use  
Resort lodging  
Recreation cabin use  
Hunting  
Nature studies  
Mountain climbing  
Gathering forest products  
Interpretive services

#### Water Based:

Tour boat use  
Boat (powered)  
Canoeing  
Rafting  
Drift boating  
Other water craft use  
Swimming and waterplay  
Watersports  
Diving (skin and scuba)  
Fishing

#### Snow and Ice Based:

Not applicable

### Rural River

#### Land Based:

Viewing scenery  
Viewing activities  
Viewing works of human-kind  
Automobiles (includes off-road use)  
Motorcycle and scooter use  
Bus touring  
Aircraft use  
Aerial trams and lifts use  
Hiking and walking  
Bicycling  
Horseback riding  
Camping  
Picnicking  
Resort and commercial services use  
Resort lodging  
Recreation cabin use  
Hunting  
Nature studies  
Gathering forest products  
Interpretive services  
Individual sports participation  
Games and play participation

#### Water Based:

Tour boat use  
Boat (powered)  
Canoeing  
Rafting  
Drift boating  
Other water craft use  
Swimming and waterplay  
Watersports  
Diving (skin and scuba)  
Fishing

#### Snow and Ice Based:

Not applicable

These activities are illustrative only. Specific additions or exception of activities within a ROS subclass may occur depending upon local conditions (see standards and guidelines and alternative descriptions in Chapter 2).



## Appendix E-3. Recreation Opportunity Spectrum Setting Characterization

Semiprimitive Nonmotorized River	Modified Natural Motorized River	Rural River
Area is characterized by a predominantly natural or natural-appearing environment of moderate-to-large size (small to moderate size in Hellgate Recreation Area - see Klein 1992). Interaction between users is low, but there is often evidence of other users. The area is managed in such a way that minimum on-site controls and restrictions may be present, but are subtle. Motorized use is not permitted.	Area is characterized by predominantly natural-appearing environments with moderate evidences of the sights and sounds of man. Such evidence usually harmonize with the natural environment. Interaction between users may be low to moderate, but with evidence of other users prevalent. Resource modification and utilization practices are evident, but harmonize with the natural environment. Motorized use both on land and water is permitted. Conventional motorized use is provided for in construction standards and design of facilities.	Area is characterized by a substantially modified natural environment. Resource modification and utilization practices are to enhance specific recreation activities and to maintain vegetative cover and soils. Sights and sounds of humans are readily evident, and the interaction between users is often moderate to high. A considerable number of facilities are designed for use by a large number of people. Facilities are often provided for special activities. Moderate densities are provided for away from developed sites. Facilities for intensified motorized use and parking are available.

These characterizations are descriptive only. The ROS subclass delineation criteria need to be reviewed to identify the actual areas to which these descriptions apply (see Klein 1992; Klein 1993).



## Semiprimitive Nonmotorized River

High, but not extremely high, probability of experiencing isolation from the sights and sounds of humans, independence, closeness to nature, tranquility, and self-reliance through the application of woodsman and outdoor skills in an environment that offers challenge and risk.

### Modified Natural Motorized River

About equal probability to experience affiliation with other user groups and for isolation from the sights and sound from of humans. Opportunity to have a high degree of interaction with the natural environment. Challenge and risk opportunities associated with more primitive type of recreation are not important. Practice and testing of outdoor skills might be important. Opportunities for both motorized and nonmotorized forms of recreation possible.

## Rural River

Probability for experiencing affiliation with individuals and groups is prevalent, as is the convenience of sites and opportunities. These factors are generally more important than the setting and the physical environment. Opportunities for wild-land challenges, risk-taking, and testing of outdoor skills are generally unimportant except for specific activities like downhill skiing, for which challenge and risk-taking are important elements.

These experiences are highly probable outcomes of participating in recreation activities in specific recreation settings.

## Appendix E-5. Peak Visitor Use Seasons Within the Hellgate Recreation Area

Month	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Day Use												
Motorized Boating												
Nonmotorized Boat Fishing												
Nonmotorized Float Boating												
Dominant visitor use seasons are based on patterns which involve the largest numbers of visitors and/or watercraft.												



## Appendix E-6. Primary and Secondary Visitor Use Seasons Within the Hellgate Recreation Area <sup>1</sup>

Month	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Primary Season												
Secondary Season												
1. Dominant visitor use seasons are based on patterns which involve the largest numbers of visitors and/or watercraft.												



Appendix B-4. Illustrative Organizational Design: A Case Study

Organizational Design: A Case Study		Illustrative Organizational Design		Rationale	
Highly structured, highly predictable, and highly controlled environment with high levels of automation and high levels of specialization and differentiation.	Highly structured, highly predictable, and highly controlled environment with high levels of automation and high levels of specialization and differentiation.	Highly structured, highly predictable, and highly controlled environment with high levels of automation and high levels of specialization and differentiation.		Highly structured, highly predictable, and highly controlled environment with high levels of automation and high levels of specialization and differentiation.	
		Highly structured, highly predictable, and highly controlled environment with high levels of automation and high levels of specialization and differentiation.		Highly structured, highly predictable, and highly controlled environment with high levels of automation and high levels of specialization and differentiation.	

Organizational Design: A Case Study		Illustrative Organizational Design		Rationale	
Highly structured, highly predictable, and highly controlled environment with high levels of automation and high levels of specialization and differentiation.	Highly structured, highly predictable, and highly controlled environment with high levels of automation and high levels of specialization and differentiation.	Highly structured, highly predictable, and highly controlled environment with high levels of automation and high levels of specialization and differentiation.		Highly structured, highly predictable, and highly controlled environment with high levels of automation and high levels of specialization and differentiation.	
		Highly structured, highly predictable, and highly controlled environment with high levels of automation and high levels of specialization and differentiation.		Highly structured, highly predictable, and highly controlled environment with high levels of automation and high levels of specialization and differentiation.	



# Appendix F

## Botanical Resources

### Background Paper

for revising the

Helgate Recreation Area Management Plan



John Williams



U.S. Department of the Interior



Bureau of Land Management  
Regional District Office  
Division of Operations

May 1993



# Appendix F Botanical Resources Background Paper

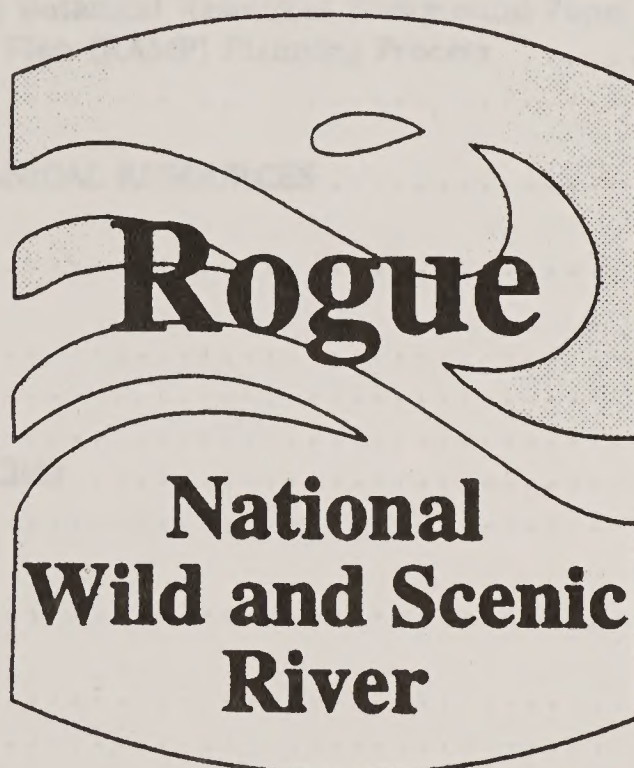


# Botanical Resources

## Background Paper

for revising the

## Hellgate Recreation Area Management Plan



Beth Whitman



U.S. Department of the Interior



Bureau of Land Management  
Medford District Office  
Division of Operations

May 1993



# Botanical Resources

Background Paper

for revising the

Hellgate Recreation Area Management Plan



Bob Whitman

U.S. Department of the Interior

Bureau of Land Management  
Medford District Office  
Division of Operations



May 1983



# Botanical Resources

## Background Paper

for  
revising the

## Hellgate Recreation Area Management Plan

### TABLE OF CONTENTS

I.	RELATIONSHIP TO PLANNING PROCESS .....	1
A.	Background .....	1
B.	Bureau of Land Management Decision .....	1
C.	Relationship of the Botanical Resources Background Paper to the Recreation Area Management Plan (RAMP) Planning Process .....	1
	Map .....	2
II.	INTRODUCTION TO BOTANICAL RESOURCES .....	3
III.	VEGETATION REGIMES .....	3
A.	Mixed Evergreen .....	3
B.	Oak Woodlands .....	3
C.	Mixed Conifer .....	3
D.	Steep Slopes and Cliffs .....	4
E.	Riparian .....	4
IV.	SPECIAL STATUS PLANTS .....	4
A.	<i>Arabis modesta</i> .....	4
B.	<i>Sedum moranii</i> .....	4
C.	<i>Sophora leacheana</i> .....	4
D.	<i>Mimulus douglasii</i> .....	5
E.	<i>Microseris howellii</i> .....	5
F.	<i>Allium bolanderi</i> .....	5
G.	<i>Cypripedium fasciculatum</i> .....	5
V.	OTHER SPECIES OF INTEREST .....	5
A.	<i>Lewisia cotyledon</i> var. <i>howellii</i> .....	5
B.	<i>Adiantum jordanii</i> .....	5
C.	<i>Woodwardia fimbriata</i> .....	6
	REFERENCES .....	7



# Botanical Resources

## Background Paper

for  
revising the

## Hellgate Recreation Area Management Plan

### TABLE OF CONTENTS

I.	RELATIONSHIP TO PLANNING PROCESS	1
A.	Background	1
B.	History of Land Management Decision	1
C.	Relationship of the Botanical Resources Background Paper to the Recreation Area Management Plan (RAMP) Planning Process	1
	Map	2
II.	INTRODUCTION TO BOTANICAL RESOURCES	3
III.	VEGETATION REGIMES	3
A.	Mixed Evergreen	3
B.	Oak Woodlands	3
C.	Mixed Conifer	3
D.	Steep Slopes and Cuts	4
E.	Sagebrush	4
IV.	SPECIAL STATUS PLANTS	4
A.	Arabis modesta	4
B.	Sedum meansii	4
C.	Sophora leucantha	4
D.	Minuartia douglasii	5
E.	Mimulus howellii	5
F.	Alnus belandieri	5
G.	Cypripedium fasciculatum	5
V.	OTHER SPECIES OF INTEREST	5
A.	Lewisia rediviva var. howellii	5
B.	Adiantum vancouverianum	5
C.	Woodwardia fimbriata	6
	REFERENCES	7



# Botanical Resources

## Background Paper

for  
revising the

### Hellgate Recreation Area Management Plan

#### I. RELATIONSHIP TO PLANNING PROCESS

##### A. Background

The 27-mile Hellgate Recreation Area of the Rogue River from the Applegate River to Grave Creek provides a broad range of land and water based recreation opportunities (see map 1). Recreational use of this segment of the river is managed by a minimum of regulations. Campgrounds, several day-use recreation sites, and boat launching facilities are available. All commercial recreation is regulated by permit. Present commercial activities permitted are motorized tour boats (MTBs), guided floats, and fishing trips. Private recreation activities are unregulated by the Bureau of Land Management (BLM). The river's proximity to Medford and Grants Pass, abundant nearby recreation support services (e.g., shuttles, rafting supplies, motels, restaurants, guides, etc.), and a growing public interest in river recreation have led to a tremendous increase in visitor use (Austermuehle 1992).

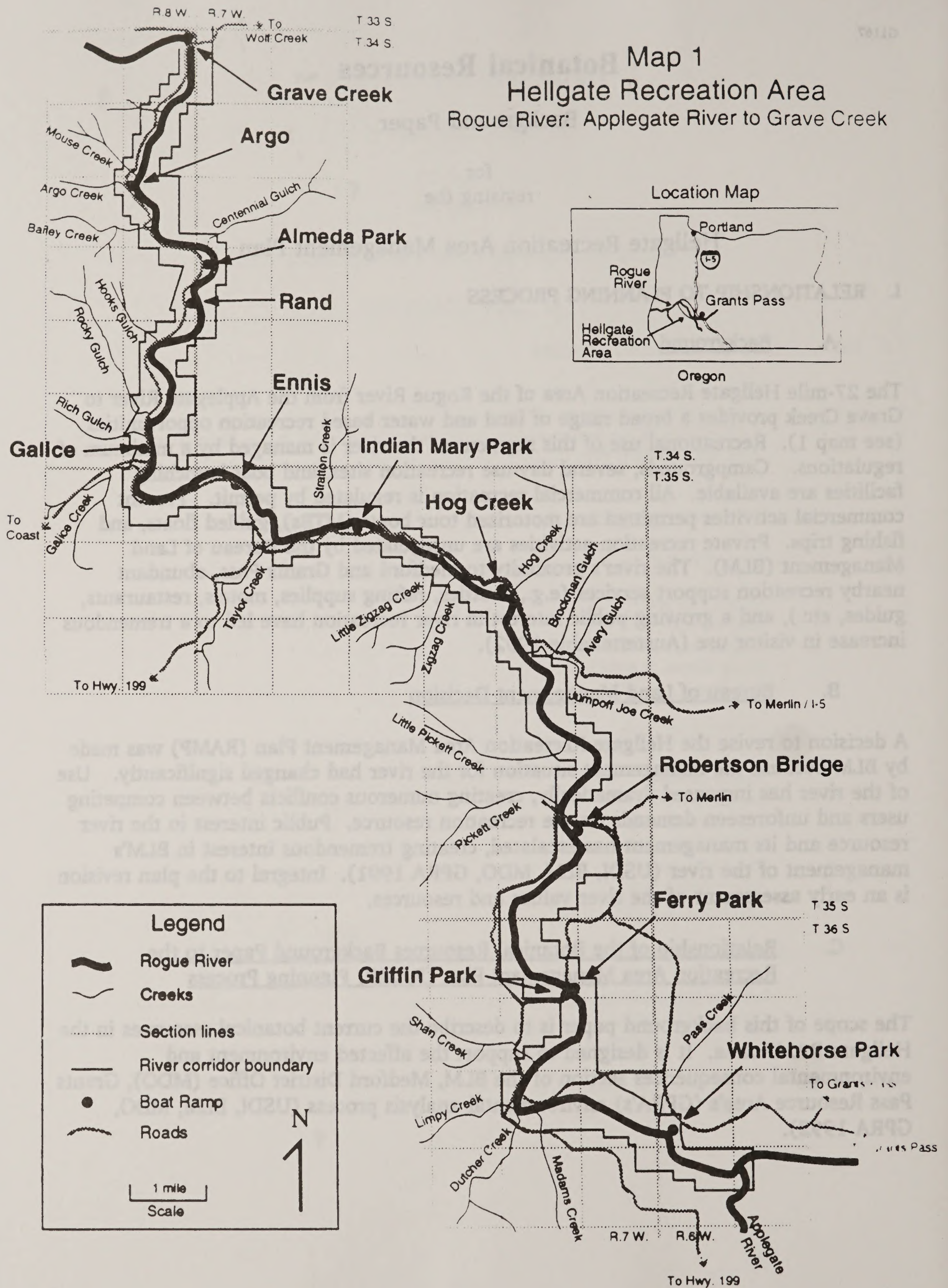
##### B. Bureau of Land Management Decision

A decision to revise the Hellgate Recreation Area Management Plan (RAMP) was made by BLM because the management situation for the river had changed significantly. Use of the river has increased dramatically, creating numerous conflicts between competing users and unforeseen demands on the recreation resource. Public interest in the river resource and its management has escalated, creating tremendous interest in BLM's management of the river (USDI, BLM, MDO, GPRA 1991). Integral to the plan revision is an early assessment of the river values and resources.

##### C. Relationship of the Botanical Resources Background Paper to the Recreation Area Management Plan (RAMP) Planning Process

The scope of this background paper is to describe the current botanical resources in the Hellgate RAMP area. It is designed to support the affected environment and environmental consequences section of the BLM, Medford District Office (MDO), Grants Pass Resource Area's (GPRA's) environmental analysis process (USDI, BLM, MDO, GPRA 1992).







## II. INTRODUCTION TO BOTANICAL RESOURCES

There are five distinct vegetation communities within the Hellgate Recreation Area of the Rogue River. All of these communities are shaped by the climate and geology of the broader southwestern Oregon region. This area is significantly drier than further north and geologically it is an extremely complex mix of soils and rock types. There are occasional intrusions of serpentine rocks and soils which contribute significantly to the vegetational characteristics of the area. These serpentine soils are also an important factor in the large number of endemic and special status plants in the area.

## III. VEGETATION REGIMES

A. Mixed Evergreen - The mixed evergreen forest is the most common forest type of the Siskiyou Mountain region. It is found in areas that are relatively warm and wet during the winter and hot and dry during the summer months. Douglas-fir and tanoak are listed as the most important trees in this regime with madrone and oaks becoming more important in the drier areas (Franklin and Dyrness 1984).

The forest found upriver (toward Grants Pass) is not a typical mixed evergreen forest as described in Franklin and Dyrness but it does have many of the same characteristics. Ponderosa pine and madrone stand out as the most abundant species in this community. Douglas-fir, incense cedar, and some sugar pine are present as well. Manzanita and ceanothus are represented in the understory.

B. Oak Woodlands - Within the mixed evergreen zone there are areas that are characterized by an open canopy of deciduous oaks and grasses. These areas have shallower soils and, therefore, they are drier sites than the surrounding mixed evergreen forest. White oak and black oak dominate this vegetation regime and often the change between these first two ecotypes is fairly abrupt.

C. Mixed Conifer - Downriver the mixed evergreen forest gradually becomes a mixed conifer forest dominated by Douglas-fir instead of ponderosa pine. At times this forest becomes quite dense, particularly in the draws, and here it is often host to the various interesting large ferns.

In the mixed conifer zone description, Douglas-fir is most often the dominant tree in the more northern areas and various species of pine dominate in the southern areas. The canopy cover is more complete in this community and the understory consists of species such as hazelnut, oceanspray, chinkapin, and others (Franklin and Dyrness 1984).



D. Steep Slopes and Cliffs - As the canyon walls steepen, a rock cliff dominates the landscape and clubmosses, small ferns, and other small dryland plants inhabit the places where there is enough soil for them to survive. Evergreen live oak is the dominant tree in this area, especially as one travels down river, and the rock outcrops become steep talus slopes. Some of these rocky outcroppings feature plants known to be found on serpentine soils such as the Oregon cliff brake, the maidenhair fern, and yerba santa (Franklin and Dyrness 1984).

E. Riparian - The fifth vegetational community is the riparian zone directly alongside the riverbank. Willows are found immediately adjacent to the water and large black cottonwoods dominate the floodplains. Alders are present with cottonwoods and bigleaf maples occupying the areas a little higher up on the banks. Large ponderosa pine sometimes occur on the larger floodplains of the river. This community is fairly typical of riparian communities throughout western Oregon (Franklin and Dyrness 1984).

#### IV. SPECIAL STATUS PLANTS

There are seven special status species in the vicinity of the Hellgate Recreation Area. Three are candidates for Federal listing; one is a BLM sensitive species and the other three are BLM assessment species.

Three of these species are found within ½ mile of the river. The following paragraphs summarize each of these species:

A. Arabis modesta of the mustard family (Brassicaceae) is currently a BLM assessment species. It has a purple flower and a whorl of basal leaves. It grows on the rock banks, walls, and bluffs along the Rogue River near Galice and at various sites in the Klamath Mountains. The plant is well adapted to exposed areas and dry serpentine soils. It flowers March through May.

B. Sedum moranii of the stonecrop family (Crassulaceae) is currently a Federal candidate. It is a succulent herb with a striking reddish-purple stem. The yellow flower is covered with glandular hairs. It grows on steep, serpentine rock outcrops and is found only along the Rogue River. It flowers May through June.

C. Sophora leacheana of the pea family (Fabaceae) is currently a Federal candidate. It has greenish white flowers and arching pinnate leaves with 15-20 leaflets. It grows in wooded areas on soils with a serpentine substrate. It flowers April through June.



Four additional special status species are found higher up in the hills of the Rogue River watershed. The following paragraphs summarize each of these species:

D. Mimulus douglasii of the figwort family (Scrophulariaceae) is currently a BLM assessment species. It is a small annual with a purple flower. It is a serpentine endemic that grows in open gravelly places that are moist in the spring. Populations of this plant are found from central California to central Oregon. It flowers March through May.

E. Microseris howellii of the sunflower family (Asteraceae) is currently a Federal candidate. The yellow flower develops from a nodding bud and the pinnatifid/lanceolate leaves are mostly basal. It grows on dry, rocky areas of serpentine soil. Most of the populations of this species are in and around the Illinois Valley. The populations in this area are the northernmost populations of this species. It flowers April through July.

F. Allium bolanderi of the lily family (Liliaceae) is currently a BLM assessment species. It has a pink-white flower and stands about 20 cm tall. It is found on heavy clay soil in openings among brushy woods and on stony slopes and gravelly flats of serpentine soil. This plant is found in the Siskiyou Mountains from Mendocino County to southern Oregon.

G. Cypripedium fasciculatum of the orchid family (Orchidaceae) is currently a BLM sensitive species. It has two fairly large opposite leaves and a whitish flower with brown-purple veins on the sac-like lower petal. It is found in wooded areas on north facing slopes. This species is found in small discontinuous populations in numerous western states. It blooms April through June.

## V. OTHER SPECIES OF INTEREST

While these species do not have special status they are interesting and somewhat unusual plants that inhabit the area.

A. Lewisia cotyledon var. howellii of the purslane family (Portulacaceae) has attractive pink flowers on a stem that rises from a basal rosette of wrinkle-edged leaves. It grows on shallow rocky soils at lower elevation ridge lines and south facing slopes. It blooms April through May.

B. Adiantum jordanii is a delicate fern (Pteridaceae) with rounded to reniform pinnules. It grows in the steep, narrow, feeder canyons along the shady south side of the Rogue River. It is relatively common in California but rare in Oregon.



C. Woodwardia fimbriata is a coarse, rather large, pinnatifid fern (Blechnaceae). It grows in damp areas of canyons on the shady south side of the Rogue River and is fairly common in such canyons throughout the western states.



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# Appendix G

## Fisheries Factors and Assumptions

The fishery status of each species is determined by the 1997, 2000, and 2003 assessments (see Table 4.6). Table 4.6 provides a summary of the factors used in the 1997, 2000, and 2003 assessments.



# Appendix G Fisheries Factors and Assumptions



Fishery factors and assumptions include:

- Fall chinook redds are found in riffles in the main channel where boating activity occurs.
- Fall chinook salmon spawning, courtship displays, redd building and fertilization are considered sensitive to disturbance from boats passing over these areas.
- The Rogue River is a major migration corridor for salmon and steelhead year around.
- Spring chinook spawn upstream from the HRA above the fall chinook.
- Motorized tour boat use has increased and fall chinook numbers have slightly increased.
- Potential disturbance to spawning salmon from boats is possible when they pass close to salmon. Disturbance to eggs in the redds or nests is possible when boats pass over a redd.
- Float craft that utilize outboard engines as kickers are more likely to travel in the shallower waters along the river's edge, outside the main channel. It is possible the use of kickers may potentially disturb chinook spawning or eggs in the gravel.
- Steelhead spawn in low numbers in the planning area.

The fishery analysis compares alternatives to 1991 levels or current management (see Table 4-6). Table App-G-1 summarizes some of the factors listed in each alternative considered in the fisheries analysis.







## Appendix G-1. Factors Affecting Each Alternative Considered for Fishery Analysis

<b><u>Alternative A</u></b>	
MTB season -5/1 - 9/30	12 trips
Private season -all year	1985 trip limit
Fall chinook spawning	No areas designated for motorized boat use
<b>Visitor Use Projections Year 2007</b>	
MTB	57,946
Private floats and MB (5%)	20,169
Total Visitors	819,130
<b>All Water Craft Use Projections Year 2007</b>	
MTB	1,836
Private	182
Total	3,857
<b><u>Alternative B</u></b>	
MTB season - 5/1-9/30	19 trips
Private season -all year	No limits
Fall Chinook Spawning -	No areas designated for motorized boat use
<b>Visitor Use Projections Year 2007</b>	
MTB	89,310
Private floats and MB (5%)	31,544
Total Visitors	917,251
<b>All Water Craft Use Projections Year 2007</b>	
MTB	2,907
Private	14,336
Total	26,275
<b><u>Alternative C</u></b>	
MTB season - 5/1 - 9/15; 9/16 - 9/30 conditional	12 trips
Private season - 5/1 - 9/15 Applegate Reach	No limits
All year for Dunn Reach	No limits
Fall Chinook Spawning	No motorized boat use designated in 13 areas
<b>Visitor Use Projections Year 2007</b>	
MTB	53,758



Private floats and MB (5%)	31,443
Total Visitors	922,030
<b>All Water Craft Use Projections Year 2007</b>	
MTB	1,836
Private	14,282
Total	25,126
<b><u>Alternative D</u></b>	
MTB season - 4/1 - 10/31	26 trips
Private season - all year	No limits
Fall Chinook Spawning	No motorized boat use in four areas
<b>Visitor Use Projections Year 2007</b>	
MTB	116,487
Private floats and MB (5%)	31,544
Total visitors	1,010,852
<b>All Water Craft Use Projections Year 2007</b>	
MTB	3,978
Private	14,336
Total	28,257
<b><u>Alternative E</u></b>	
MTB season - 5/1 - 9/15; 9/16 - 9/30 conditional	19 trips
Private season - all year for Applegate and Dunn reaches	No limits
Fall chinook Spawning	No motorized boat use in four areas
<b>Visitor Use Projections Year 2007</b>	
MTB	85,122
Private floats and MB (5%)	31,544
Total Visitors	941,329
<b>All Water Craft Use Projections Year 2007</b>	
MTB	2,907
Private	14,336
Total	26,251



# Appendix H Other Maps

## Appendix Map 1

### Potential Camping and Day Use Sites

Rogue River: Appleton River to Jumpoff Joe Creek





# Appendix H

## Other Maps

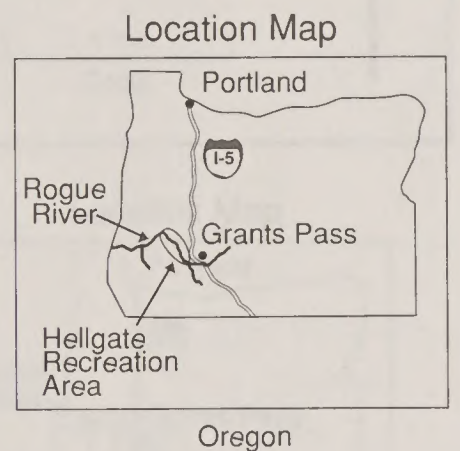
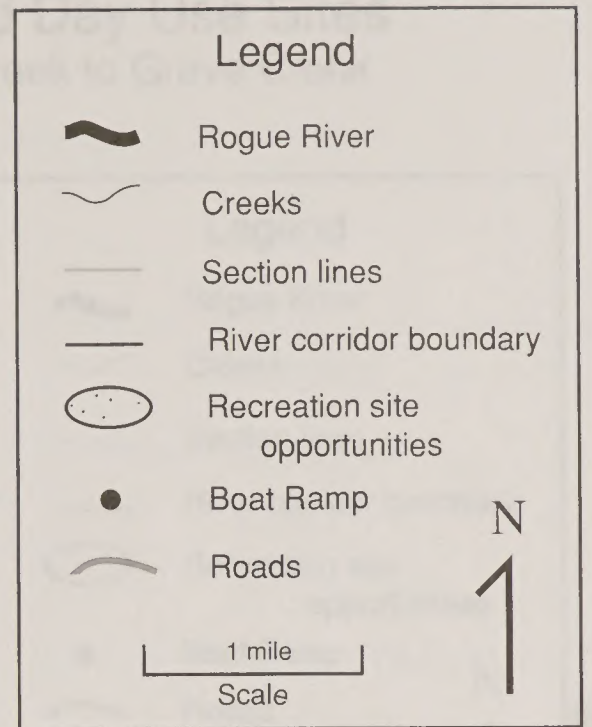
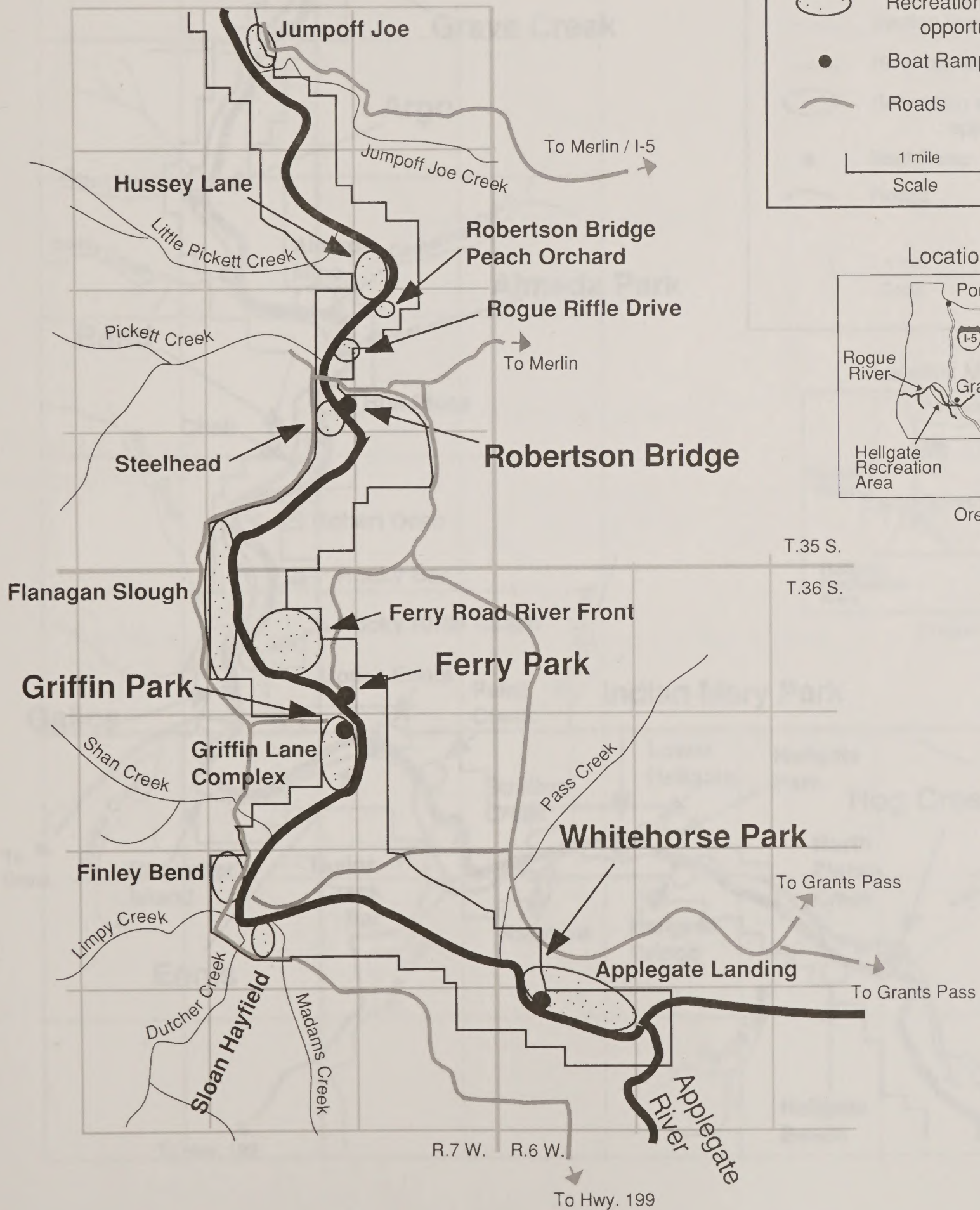
Area	1,476
Perch	14,201
Total	20,176
<b>Appendix D</b>	
MTB season 2011-2012	20,076
MTB season 2012-2013	20,076
Full Season Reporting	No information found in this area
<b>Winter Use Projections Year 2007</b>	
MTB	11,187
Perch (2006 and 2007)	11,704
Total Values	11,704
<b>All Winter Crabs Use Projections Year 2007</b>	
MTB	1,076
Perch	11,704
Total	11,704
<b>Appendix E</b>	
MTB season 2011-2012, 2012-2013, 2013-2014	11,704
Perch season 2011-2012, 2012-2013, 2013-2014	No data
Full Season Reporting	No information found in this area
<b>Winter Use Projections Year 2007</b>	
MTB	11,187
Perch (2006 and 2007)	11,704
Total Values	11,704
<b>All Winter Crabs Use Projections Year 2007</b>	
MTB	1,076
Perch	11,704
Total	11,704



## Appendix Map 1

### Potential Camping and Day Use Sites

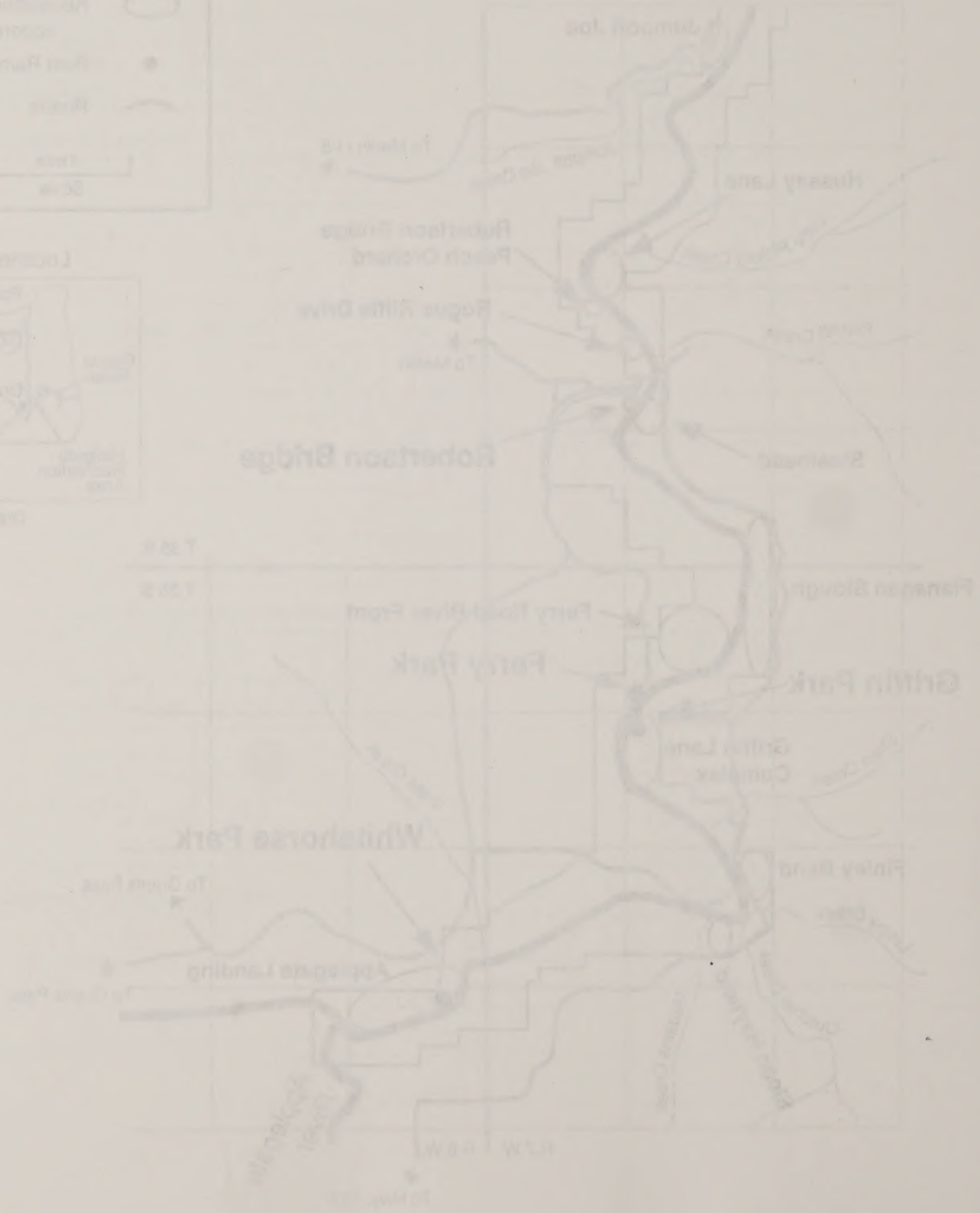
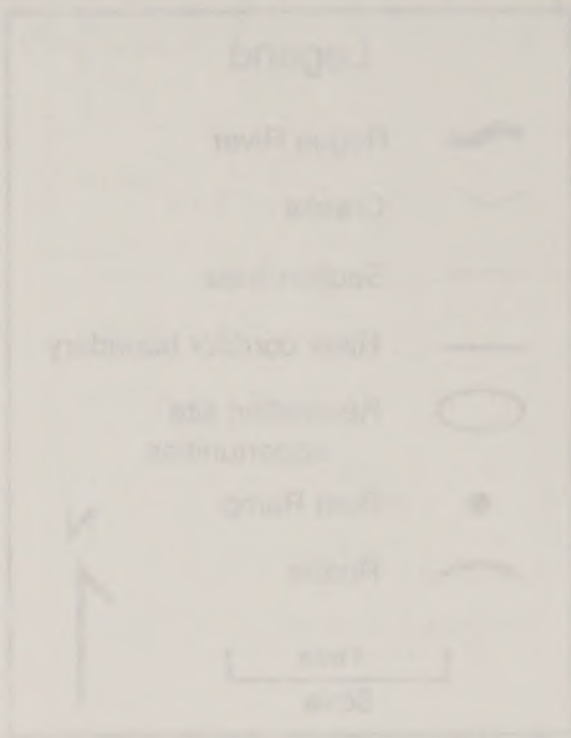
Rogue River: Applegate River to Jumpoff Joe Creek





# Appendix Map 1

## Potential Camping and Day Use Sites Rogue River, Applegate River to Juniper Creek

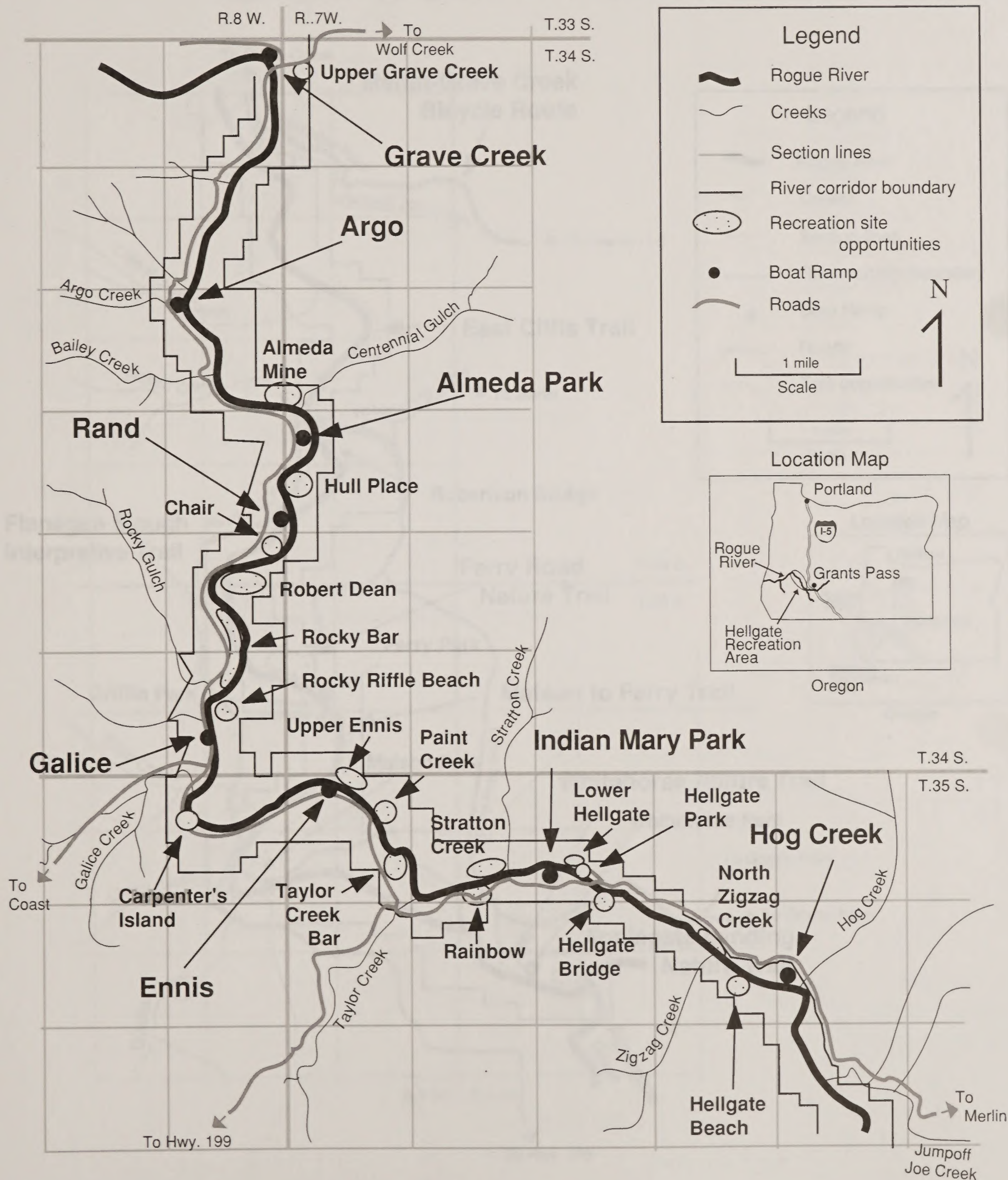




## Appendix Map 2

### Potential Camping and Day Use Sites

Rogue River: Jumpoff Joe Creek to Grave Creek





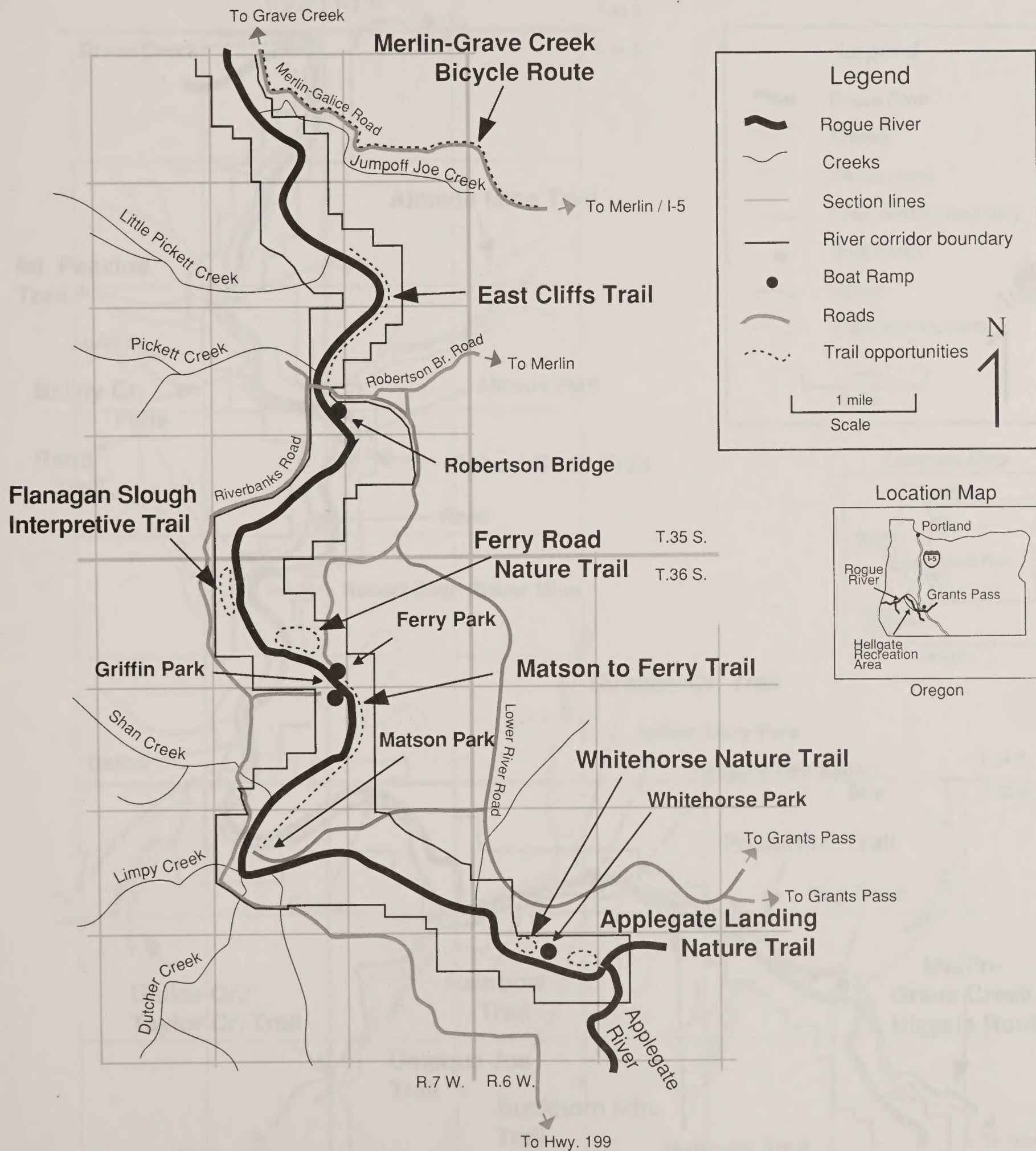




## Appendix Map 3

### Potential Trails

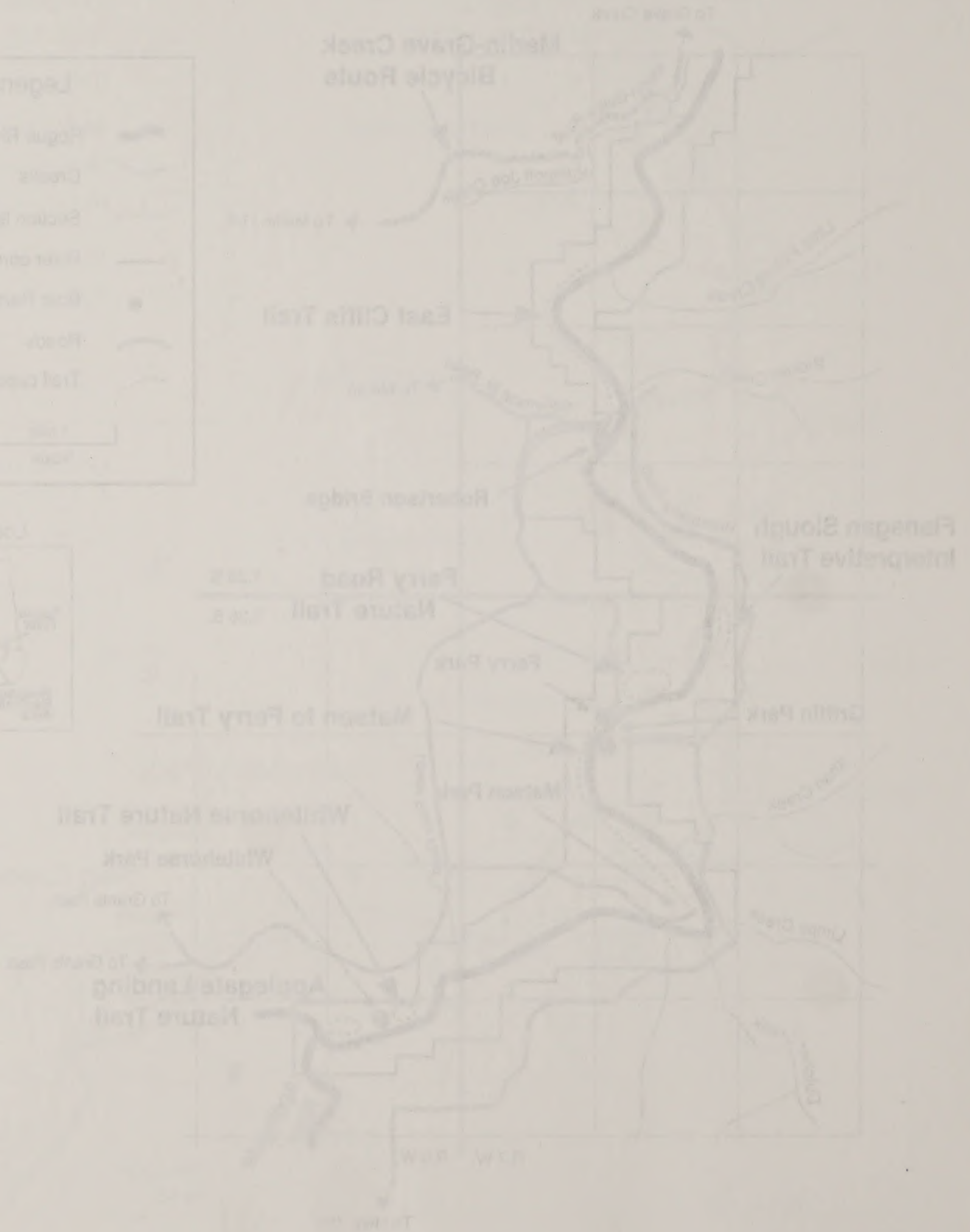
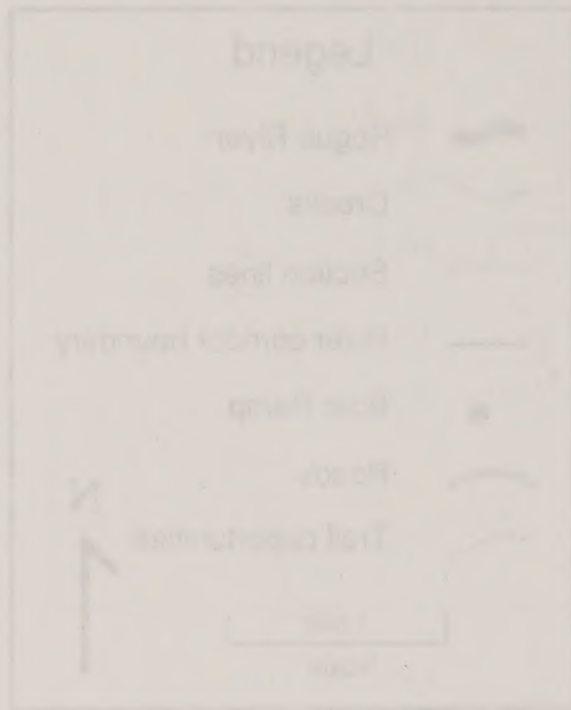
Rogue River: Applegate River to Jumpoff Joe Creek





# Appendix Map 3

## Potential Trails Rogue River, Applegate River to Juniper Joe Creek

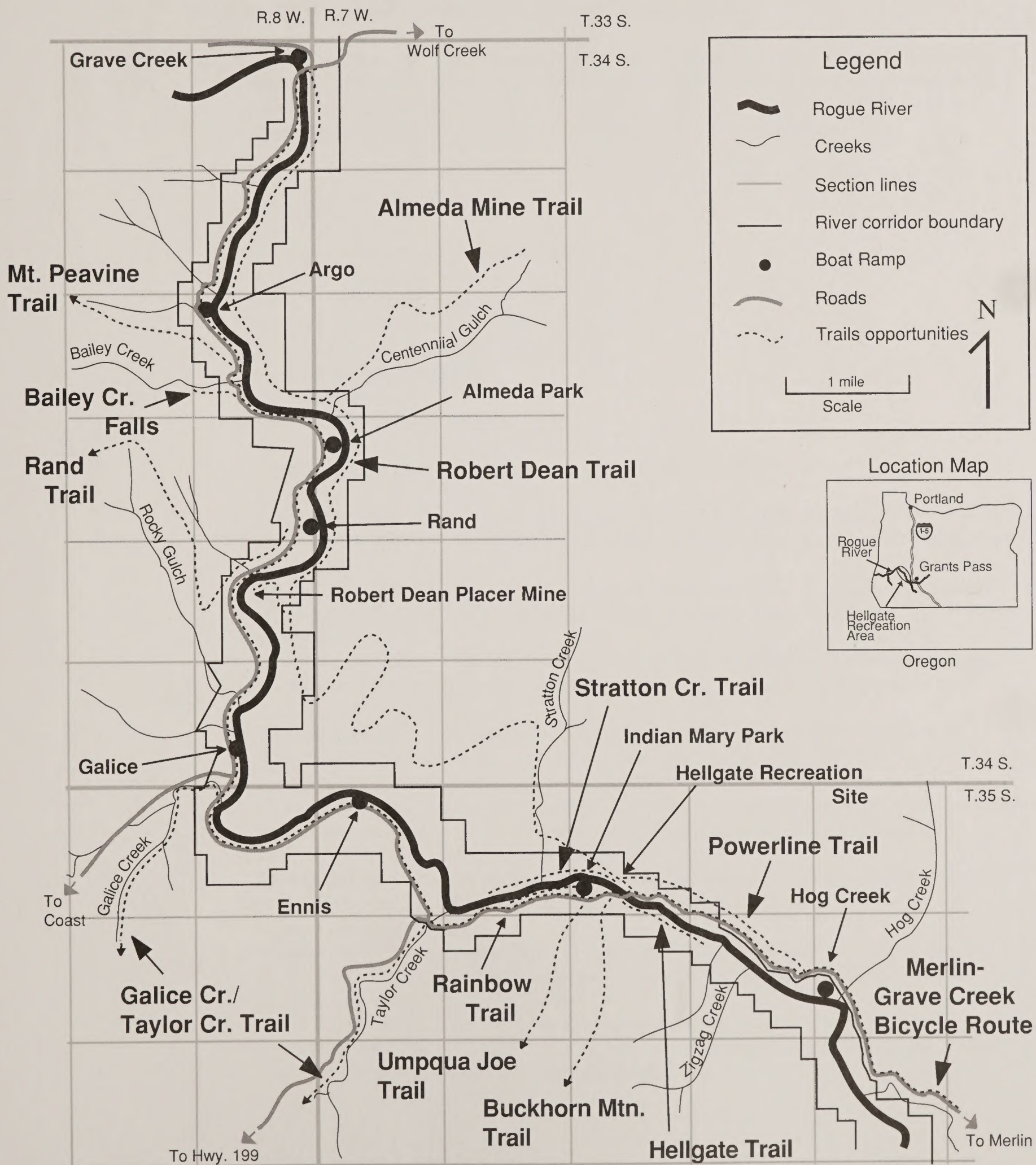




## Appendix Map 4

### Potential Trails

Rogue River: Jumpoff Joe Creek to Grave Creek





# Appendix Map 4

## Potential Trails

Rogue River, Juniper Creek to Grave Creek





# Visitor



# Appendix I Visitor Center Site Locations



Recreation is one of the three Outstandingly Remarkable Values for which the Rogue River was designated as a component of the Wild and Scenic Rivers System. Providing a quality facility to serve the visiting public enhances the recreation experience and provides the BLM with a tool for educating the public on land use ethics. This fact supports the management goal of enhancing and protecting the recreation ORV.

To best serve the public, the visitor center should be located near the peak use area of the river. River users desire convenience in obtaining river permits for the wild section, accessing interpretive information and utilizing the physical attributes of the center. Locations outside of the river corridor do not offer the convenience recreationists desire.

A key factor in the placement of such a facility is to minimize its impact on the visual resource. Although it is necessary to place the structure near the river for the convenience of users, design measures must be employed to maintain a natural appearing river environment. Vegetative screening and appropriate coloration of the building would achieve this goal.

Criteria	Grants Pass	Merlin	Hog Creek	Rand
Outstandingly remarkable values				X
Located near the river	X		X	X
Provide recreation section services and facilities		X	X	X
Proximity to existing facilities				X
Minimize environmental intrusion	X	X		X
Convenient for wild section permittees		X	X	X
Convenient for recreation section boaters		X	X	X
Convenient for byway users		X	X	X
On BLM property			X	X
Utilities, infrastructure, roads, etc.	X	X		X

- **Outstandingly remarkable values.** The selected site should enhance as many ORVs as possible.
- **Located on river.** The VC would be located at a site that provides the public with a view of the river. The center would be near a launch point and located at a site that is not obtrusive to river users.
- **Recreation section services.** The VC would be located within the river corridor to provide services directly to users of the recreation section, such as restroom facilities and interpretative materials.
- **Proximity to existing facilities.** The VC would be located near existing river management facilities to eliminate disturbance to undisturbed areas and to ensure an efficient work environment for the employees.
- **Minimize environmental intrusion.** The VC would have minimal impact on the river environment and would be located outside of the riparian zone. See Effects to Visitor Services Common to All Alternatives.
- **Convenient for wild section permittees.** Facilities would be usable by wild section permittees (private and commercial), such as access to wild section permits, restrooms, parking, interpretive services, and river-use etiquette.
- **Convenient for recreation section boaters.** Facilities would be usable by recreation section boaters and other users primarily in the section below Hellgate (Dunn Reach) where the majority of use occurs.
- **Convenient for byway users.** The VC would be located near the Galice-Hellgate National Back Country Byway for other recreation day-uses, such as hiking, picnicking, wildlife viewing, swimming, and driving for pleasure.
- **On BLM property.** The acquisition of additional property would be avoided.
- **Infrastructure.** The VC would be sited to take advantage of existing infrastructure. Existing roads and utilities would be utilized as much as possible.



## Location Criteria by Site

The VC building would require approximately 1 acre of space including ingress and egress from the existing access road. This building is designed in components and can easily be adjusted in size to accommodate differing levels of staff assigned to the site. In its smallest configuration, it would serve only the needs of the staff currently working out of the Rand site. In its largest configuration, it would provide space for the entire Rogue River Program staff. If the entire project were to be built (camping area, equipment storage building, secure parking area etc.), then approximately 10 acres within the area would be utilized. The area would be screened from the river.

Convenience of use is a key concept in choosing a location for such a facility. The public presently using the Rand site appreciate its location near the main road, and its close proximity to the river, boat ramps, toilets and other developments in the area. The Hellgate stretch of the Rogue is bordered by county roads and dotted with visible residences throughout its length. Any proposed location would be in concert with the existing building and traffic density found in the area. Locating a visitor facility away from the locus of maximum use (outside the river corridor) would impair the convenience desired by our customers, the recreating public.

**Grants Pass.** The Grants Pass site would not enhance the three ORVs. The probable location has no identified ORVs since it is outside of the designated river corridor. The location of the Grants Pass site has not yet been determined, and it may or may not be near the river. The site would not conveniently provide wild and recreation section services nor serve backcountry byway users. The Grants Pass site would not cause additional environmental intrusion. Property would have to be purchased to place the center in Grants Pass. The infrastructure would be in place.

**Merlin.** The Merlin site would not enhance the three ORVs. The probable location has no identified ORVs since it is outside of the designated river corridor. The location of the Merlin site has not yet been determined and it would not be near the river. The Merlin site would not cause additional environmental intrusion. The site is convenient for wild and recreation section users and backcountry byway users. Property would have to be purchased to place the center in Merlin. The infrastructure would be in place.

**Hog Creek.** The Hog Creek site would diminish the scenic ORV and enhance the recreation ORV. The location is near the Hellgate overlook. This location is highly visible from the river. This site would meet all of the remaining criteria, except for proximity to facilities, minimizing environmental intrusion, and infrastructure. This site is eight miles from existing management facilities at Rand. Construction would adversely effect the physical and aesthetic environment. The infrastructure would be prohibitively expensive to develop.

**Rand.** The Rand site would enhance the recreation ORV and would not detract from the other two ORVs. This location would be near the river. This site would meet all of the remaining criteria.







BLM Library  
Denver Federal Center  
Bldg. 50, OC-521  
P.O. Box 25047  
Denver, CO 80225

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Denver Federal Center  
Bldg. 50, OC-521  
P.O. Box 25047  
Denver, CO 80225







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DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT**

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Medford, Oregon 97504

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